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A National Newspaper for Every Branch of the Industry

Automotive Daily News

★CARS★ SHOP EQUIPMENT TRUCKS ★★AVIATION★★ PARTS ACCESSORIES ★TIRES★

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PREDICT 3,850,000 OUTPUT FOR 1931

Plan De Vaux 6 Exhibit At Chicago During Show; Car Details Announced

De Vaux Reports Wide Reception of New Line, With Many New Dealers Signed; Chicago Exhibit To Be Held at Auditorium

CHICAGO, Dec. 24.—Representatives of the De Vaux-Hall Motor Company, preparing for the debut of the late addition to the American automobile industry, have reserved space in the Auditorium Hotel here for the initial display of the new line during the Chicago show.

So well has the De Vaux line been received already, despite its being only a few weeks since Norman De Vaux and W. C. Durant severed their business alliance, and the new company was organized, it is expected that the Chicago De Vaux display will be one of the features of the show week here, even if it is not in the Coliseum.

Word has company officials here that the dealer meeting held in Oakland, Cal., last Saturday was an overwhelming success. More than 200 dealers were in attendance and it is reported that more than 90 per cent. of these De Vaux retailers have signed to follow him in his new venture.

In connection with this meeting of the dealers who will handle the De Vaux on the Pacific Coast advance specifications on the new six have just been announced. The principal technical details of this car are as follows:—

Engine—Six-cylinder. "L" head. Bore 3⅜ inches, stroke 4 inches, 27.34 h. p. N. A. C. C. rating, 65-brake horse power at 3,400 r. p. m. Interchangeable main bearings, bronze-backed, babbitt lined. Non-detonating cylinder head. Aluminum alloy pistons. Force feed lubrication. Camshaft driven by silent chain.

Cooling—Tubular radiator, capacity 3½ gallons. Large centrifugal water pump near rear of block. Theromstatt controls engine temperature.

Fuel System—Twelve gallon gasoline tank at rear of chassis. Electric gasoline gauge on dash. Fuel pump to plain tube, high-power car-

(Continued on Page 2)

NASH MAKES GOOD SHOWING FOR YEAR

New York, Dec. 24.—The annual report of Nash Motors Company probably will be published during Automobile Show week, the first week in January. As the first report by a leading independent company on the year's operations, and coming at a time when the automobile trade is gathered in New York, and automotive developments probably receive more local consideration than at any other time in the year, the report is likely to create a great deal of favorable sentiment.

In financial circles, estimates of the year's results covering the fiscal twelve months ended November 30 last, in the absence of final figures, indicate a showing somewhat better than previously predicted. Conservative forecasts place the year's net at around $7,500,000, or around $2.75 a

(Continued on page 12)

HOLLINGSHEAD CO. NAMES SEMPLE SALES MANAGER

Camden, N. J., Dec. 24.—The R. M. Hollingshead Company here has announced the appointment of F. J. Semple as general sales manager, to succeed George F. Smith, who tendered his resignation.

Mr. Semple was formerly president of the Frank Miller Company, a Hollingshead subsidiary, prior to which he was vice-president of the Simmons Hardware Company, St. Louis, Mo.

MOTOR EXPORTS IN NINE MONTHS ONLY 4% LOWER

Washington, Dec. 24.—American exports of manufactured products, including motor vehicles and tires, during the third quarter of 1930 held up better than the commodities in raw materials or partly finished classes, it was shown today by an analysis of trade figures compiled by the United States Chamber of Commerce.

Despite price declines, the report shows that in the nine-month period the value of exports of finished manufactures fell off only 4 per cent. below the five year average.

Few of the foreign markets for automobiles, parts and accessories are buying in the quantities recorded in the record year of 1929.

Nevertheless the nine months' figures of 1930 show some exceptions: Germany, Mexico and Venezuela purchased more motor trucks; Denmark and the Netherlands bought a greater number of passenger cars; Argentina and Japan more automobile engines; Mexico and New Zealand a greater amount of

(Continued on Page 2)

EMPLOYMENT IN DETROIT SHOWS INCREASE IN FIRST TWO WEEKS OF DECEMBER

Detroit, Dec. 24.—Industrial employment here the first two weeks in December showed an increase over the end of November but a decrease from the corresponding period a year ago. A considerable reduction in employment is expected during the latter part of December and the early part of January due to factory shutdowns for year-end inventories.

Employment index of the industrial department of the Detroit Board of Commerce on December 15 was 78.5, compared with 75.8 on November 30, and 93.1 on December 15, last year. High for 1930 was 111.5 in May and low was 48 on July 31 when several plants were closed for vacation periods.

The index is compiled from the number of men on pay rolls which includes both part and full time workers. It covers two-thirds of the industrial employment in this city and is based on the monthly average for the years 1923 to 1925, inclusive, taken as 100.

FORECASTS RANGE AS HIGH AS 4,500,000 UNITS FOR U. S. AND CANADA; 15% OVER 1930

Past Averages, However, Would Place Increase Next Year at 11%; Leaders Frown on Overoptimistic Statements

NEW YORK, Dec. 24.—Estimates being made of the probable motor vehicle production in the United States and Canada in 1931 range from 3,850,000 to 4,500,000, with the leading executives of the industry inclined to accept the lower rather than the higher figure.

Recent newspaper dispatches from Detroit contained estimates of 4,500,000 for next year, with the inference that this figure represented the expectations of the automotive industry. As far as Automotive Daily News can discover, such is not the case.

As a matter of fact, leaders of the industry are inclined to frown on over-optimistic statements and believe that 4,000,000 should be made the top figure in setting estimates on 1931 production. Competent observers of the industry believe the output will range between 3,850,000 and 4,000,000.

With the 1930 output approximating 3,500,000, the upturn in 1931 would have to reach 15 per cent. in order to bring forth an output of 4,000,000 units. An increase of 11 per cent. would mean production of 3,850,000 units next year.

In the light of what has happened in the years immediately following recent economic depressions, an increase of 15 per cent. would appear to be not unlikely for 1931. As a matter of fact, the depression of 1921, the last previous depression of serious consequences, was followed in 1922 by a jump of 57 per cent. in automobile output. But there is absolutely nothing on the horizon at this time to justify the hope that the upturn of 1931 will even approach that of 1922.

The minor depression of 1924 was followed by a gain in production of 18 per cent. in 1925 and another off-year for the automotive industry, 1927, was followed by a 28 per cent. increase in output in 1928.

The recovery in 1922 was sharp for several reasons that are well

(Continued on Page 2)

LINK BELT 1930 NET EXPECTED TO EXCEED $2.60 PER SHARE

Chicago, Dec. 24.—Action of the Link-Belt Company directors in restoring the common stock to a $2.40 annual basis from the $2.60 rate which had prevailed since June, 1929, was due entirely to lower current operations and to uncertainty concerning the immediate future.

The company, with customers including all industries where large quantities of materials are handled and where mechanical handling can be substituted for manual handling, naturally has felt the slowing down

(Continued on Page 12)

CRUDE OIL PRODUCTION DOWN; IMPORTS GAIN

New York, Dec. 24.—The American Petroleum Institute estimates that the daily average gross crude oil production in the United States for the week ended December 20 was 2,202,200 barrels, as compared with 2,232,850 barrels for the preceding week, a decrease of 30,650 barrels.

Imports of petroleum (crude and refined oils) at the principal United States ports for the week ended December 20 totaled 1,368,000 barrels, a daily average of 195,428 barrels, compared with 1,836,000 barrels, a daily average of 262,286 barrels for the week ended December 13, and a daily average of 259,750 barrels for the four weeks ended December 20.

November Chevrolet Sales 23.1% of the Entire Market

DETROIT, Dec. 24.—Public response to the new Chevrolet models announced early in November is reflected in the registration returns from the first thirty states to report. These figures, which were announced today, show that the Chevrolet percentage of the total sales in the industry in these states has increased for November, both as compared with October and also as of November, 1929.

While the individual state totals were not included in the statement of the R. L. Polk Company, the figures show that in the combined registration in the first thirty states reporting Chevrolet accounted for 23.1 per cent. of the total market in November this year, as compared with 22.8 per cent. of the total market in October and 21.6 per cent. of the market in November last year.

The Chevrolet company this year advanced its new model announcement date approximately two months ahead of its usual time. This move, which was designed to stimulate sales in the ordinarily dull period, coupled with an intensive nationwide sales campaign, is apparently bearing fruit. Unit sales for the company in the first thirty states to report for November were not included in the Polk statement.

TODAY

Sparks From Detroit.....Page 2
Ford Dealer Uses 1903 Model to Sell 1930 Cars .....Page 3
Editorial: "A Christmas Message," Page 4
Calendar of Coming Events..Page 4
Contemporary Comment.....Page 4
U. S. Charts Week's Business..Page 5
News in the Truck and Bus Field, Page 6
Wholesale News and Views..Page 9
Engineering News....Pages 10-11-12

REFERENCE TABLES

Cumulative November Commercial Car Registrations.....Page 6
Major Specifications and Mechanical Details of Commercial Cars, Pages 7-8-9
Cumulative November Passenger Car Registrations.....Pages 10-11

30 States Show 37.8% Drop From October Car Sales

DETROIT, Dec. 24.—Registrations of new passenger cars in November in the first thirty states to report showed a decline of 37.8 per cent. from the figures from the same states in October, according to a statement from R. L. Polk Company here today. The totals for the thirty states were 42,662 in November, against 68,662 in October.

Ford registrations were 15,683 passenger cars, against 26,221 in the preceding month and 30,566 in November last year. On the basis of these figures the Ford company captured 36.8 per cent. of the total market in November for the thirty states, reporting a decline of 40.2 per cent. from October, as compared with 38.2 per cent. of the October market in the same states and 37.9 per cent. of market in these states in November, 1929.

Registrations of all makes in the first thirty states reporting showed a decline of 37.8 per cent. from the October figure and a drop of 49.6 per cent. from November, 1929.

Estimate 1931 Output for U. S.-Canada at 3,850,000

Continued from Page 1

known to the industry. There was a distinctly undersold condition existing in the automobile market even before the 1921 depression. The great mass of delayed buying carried over from the war years had not yet been absorbed. The "new buyers," that is, consumers entering the market for the first time and thus without old cars to turn in, were a huge factor in the automotive situation. With the return of normal conditions in 1922, all these entered the market for cars and, of themselves, provided a great impetus for a business upswing, which carried over into 1923, with still another gain in automobile output of 57 per cent.

Then perhaps as strong a factor as any was the introduction by the automotive industry on a huge scale of the selling of automobiles in all price classes on time payments.

The minor depression of 1924 was followed by a gain of only 18 per cent., indicating very strongly that already some of the factors that had played such an important part in 1922 and 1923 had partly spent themselves.

The decline in automotive production in 1927 was due largely to the fact that Ford was not in production part of that year. In fact, the slight depression of that year is sometimes referred to as "Ford's panic." It was natural, therefore, that 1928, with Ford coming back into the market, should show the increase of 28 per cent.

So it is impossible to go back into the three-year cycle of automobile production and find a year which 1931 should approximate.

As is well known, automobile production has, within the past fifteen years, proceeded in three-year cycles, with two up-years followed by one off-year.

The off-years have been as follows, and as a matter of fact these have been the only years of decreasing automobile production since the turn of the century:—

1918 —37 per cent.
1921 —24 per cent.
1924 — 8 per cent.
1927 —20 per cent.
1930 —38 per cent.

Following are the recovery years following the depression years, with the rates of increase:—

1919 +65 per cent.
1920 +15 per cent.
1922 +57 per cent.
1923 +57 per cent.
1925 +18 per cent.
1926 + 1 per cent.
1928 +28 per cent.
1929 +22 per cent.

The foregoing tables would, on the surface, seem to guarantee increased production of motor vehicles in 1931 and 1932, followed by a decline in 1933. From the vantage point of the closing days of 1930, there appear reasons why the three-year cycle may finally be broken. Every indication points to increased production in 1931 and 1932 and it now appears not at all unlikely that the uptrend may hold through 1933.

The very severity of the 1930 setback is seen by many as a retarding influence throughout 1931 and 1932, an influence that may result in a moderate recovery next year, followed by another moderate gain in 1932 and then another small increase in 1933. Thus would occur three consecutive years of increasing production. That is possible, in the view of observers, only if both the 1931 and 1932 gains in output are slight. A boom in 1931 or 1932 undoubtedly would call for an off-year in 1933.

The chief reasons why 1931 is not likely to see the sharp increase in productoin that occurred in 1922 are: There existed in 1929 an over-sold rather than an under-sold condition. The replacement market is more important than in 1922 and consumers with cars already in hand will delay buying longer than consumers with no cars. There is not apt to be a repetition of the great building boom of 1922 and 1923.

The immediate outlook is for gradually rising automobile production and sales in the first half of 1931, with both failing to reach the totals of the corresponding period of 1930, however. The let-down in the final half of next year is not expected to be as severe as the decline in the last six months of this year, with the result that production and sales in the final half of 1931 should exceed those of the final half of 1930 and by a margin sufficient to give 1931 as a whole a gain over the year just ending.

MERGER OF MORELAND, FAGEOL AND 3D FIRM SEEN NEAR COMPLETION

Los Angeles, Dec. 24.—The negotiations to merge the Moreland Truck Company of Burbank with Fageol Motors of Oakland have reached an advanced stage is the general belief in financial circles. It is also believed that a Seattle truck company will be involved in the proposed truck merger.

Strength is given the merger report by the presence in Oakland of C. W. Creighton, secretary of the Moreland Truck Company. L. H. Hill, president of the Fageol company, refuses to comment. Watt L. Moreland, vice-president of the Moreland company, admitted that there has been some conversation between the companies, but there is nothing certain yet.

Fageol and Moreland are running neck and neck in sales. Fageol sales in 1929 totaled $3,971,858, while Moreland volume totaled $3,685,862. Fageol has total assets of $4,937,336 and net working capital of $1,658,431. Moreland's total assets are $3,142,507 and net working capital $1,268,686.

31st triumphant year of the National

AUTO SHOW

JAN. 3 to 10

SPECIAL— Open on Sunday Jan. 4 2 p.m. to 10.30

The world's largest industry displays its masterpieces —three decades of progress. Fifty-one exhibitors of cars and trucks—300 models—See the latest sixteen and twelve cylinder creations—new eights, sixes, fours —Modish bodies—modern accessories. Shop equipment section (open to public after 5 p.m.) on 4th floor.

OPENS SATURDAY, JAN. 3, at 2 P. M. Daily thereafter 10 A.M. to 10.30 P.M. Admission 75c

GRAND CENTRAL PALACE

Lexington Avenue and 46th Street, New York City

DE VAUX EXHIBIT CHICAGO SHOW WEEK

(Continued from Page 1)

buretor. Controlled Manifold Heat. Gasoline filter. Air cleaner.

Electric System—Six volt, two-unit electric system. Distributor has manual and automatic spark control. Mounted above engine. Depressible beam headlights.

Clutch—Mounted with engine and transmission to form unit power plant. Multiple spring, single dry plate type with rubber insulated center, adjustable.

Transmission—Silent shift between second and high gear. Three speeds forward, and reverse.

Drive—Hotchkiss drive. Power plant, drive shaft and axle pinion housing in straight line, car loaded. Two all-metal universal joints.

Rear Axle—Semi-floating type. All tapered roller bearings.

Front Axle—Reverse Elliott type. Drop forged, heat-treated I-beam. Tapered roller bearings for wheels. Steering pivots have ball thrust bearings. Ball joints for all steering linkage. Worm and sector steering gear.

Brakes—Four-wheel, internal expanding type.

Standard Equipment — Includes electric temperature indicator and gasoline gauge, speedometer, ammeter, oil gauge, pull controls for spark, manifold heat and choke. Throttle control on steering gear. Coincidental ignition and coil lock, foot pedal headlight control, rear view mirror, automatic windshield wiper, chromium plated exterior hardware.

Wheel Base—112 inches.

MOTOR EXPORTS 4% BELOW 1929

(Continued from Page 1)

assembly parts, and Mexico and Venezuela a larger amount of parts for replacement.

During the first nine months of 1930 the United States exported 201,000 passenger cars and trucks, as compared with 454,000 in the same period of 1929, a decrease of 56 per cent. Compared with the average shipments of the last five years the decline reduces to 37 per cent.

Shipments of tires to foreign markets showed a loss of 11 per cent. in quantity and 19 per cent. in value, compared with 1929. They were 13 per cent. greater in volume and only 5 per cent. less in value than the 5 year average export figures. Increased purchases over 1929 were made by Finland, France, Italy, Netherlands, Norway, United Kingdom, Canada, Japan and the Philippines.

The decline in imports in the first nine months of 1930 is rather sharp when compared with the high value records set up in the same period of 1929.

Although American purchases of crude rubber in the nine months of 1930, in amount 835,618,000 pounds, were 15 per cent. smaller than a year ago, the quantity was exceeded only by the 1929 record imports. The average import price was 14 cents as against 19 cents a year ago.

SWEDISH MOTOR LEADER SEES PROSPECTS BRIGHT

New York, Dec. 24.—An optimistic report of industrial and commercial conditions in Sweden and other countries in northern Europe was made by Emil Salmson, prominent Stockholm automobile leader, upon his arrival in New York this week to attend the International Day events of Automobile Show week. "At the beginning of 1930," the automobile leader said, "the dealers of Sweden anticipated that world economic conditions would result in a considerable decrease in motor vehicle consumption. Instead, the automobile industry had an unusually good year, consumption falling only slightly below the record year of 1929."

C. M. COFFING, INC., TO SELL BUICK AND CADILLAC LINES

Sacramento, Cal., Dec. 24 (UTPS).—C. M. Coffing has been appointed Sacramento and vicinity dealer for the Buick and Cadillac-La Salle lines and will conduct the dealerships under the firm name of C. M. Coffing, Inc., to be located at 13th and K Streets, here.

SPARKS from DETROIT

Ned Jordan Looks Things Over

Chris Sinsabaugh—Detroit Editor

HERE is a story, which, according to one keen observer, should warm the right and left ventricles of an industry, now in the advanced years of its late twenties and just reaching the age of discretion.

It is the first expression in many months from a man named Jordan. For twenty-five years, or since the days of the two-cylinder Rambler, Jordan has apparently had a lot of fun observing and analyzing the passing show in what he calls "the greatest little business in the world."

This writer, sensing an approaching turn in the tide and knowing Ned Jordan's facility of apt expression, wrote a note to the Cleveland automobile manufacturer. It included one sentence: "What are you doing over there in Cleveland and what do you think?"

The reply from Jordan was characteristic: "Hiding from brokers, hungry for margins and waiting for the sunrise. Must thinking become popular again?"

* * *

And in the reply the following statement by Jordan was inclosed:

"Between March 1, 1931, and the same date in 1932, there will be a profitable market for about 4,500,000 new motor cars. If you can arrange to put hobbles on some of the most ambitious production men, the dealers can merchandise that number at a profit and stay in business.

"On January 1, 1930, there were about 4,000 more new cars in the hands of the dealers than on the same date in 1929, not to mention the array of unmentionables in the second-hand mausoleums.

"As of November 30, 1930, the dealers' stocks of new cars totaled 159,000, as against 219,000 on the same date a year ago.

"Dealers' stocks are lower than in any year since 1920. More than 25,000 preferred second-hand cars have been driven West from crowded Middle Western markets during the past few months. Surplus factory inventories have been liquidated and some of our most ethical dealers have found it profitable to smile at being called 'gyps.'

* * *

"COL. LEONARD AYRES, than whom none is better qualified as a prophet, says we will have 1,000,000 blowouts on the first day of March. That will sound like grand opera to Harvey Firestone and the rest on Main Street in Akron. Tires are wearing out.

"The repair shops will be busy all winter and the repair men will charge you enough for your dilatory decision to have the old car fixed.

"The stock market will definitely rise following the sales to establish new year losses for taxes and along about April 1 your daughter will discover that some of the girls in her set are abandoning their shabby cars. Then the barbers at the Detroit Athletic Club will again radiate optimism.

"Mr. Sloan will look back upon his decision not to reduce wages with more satisfaction. Roy Chapin will see the fruition of many years of creditable effort in the great expansion of highways. Trade and motor car sales follow highways. Charles W. Nash, E. L. Cord, W. J. McAneeny and others may justifiably brag about the 'buys' they made when the skies were clouded.

* * *

"THE point of diminishing returns in the retention of old cars will come in the spring.

"Lots of people have money. Only about 7 per cent. of our buyers were seriously hurt. Less than 20 per cent. are unemployed. Crowded stadiums and Christmas buying crowds are indicative.

"The job in 1931 will be to find the people who have money and make them retail buyers. Their old cars are depreciating in value every day.

"If a policy of conservatism in production is pursued the industry will have a good year.

"Distributors of volume cars who lost money last year despite volume have reduced overhead. Their volume will be less in 1931, but with curtailed expense and more conservative trades they will make money."

Coast Dealer Uses 1903 Ford to Sell New Models

William L. Hughson Co. Accomplishes Threefold Object With Demonstration — Advertising, Durability and Progress

DURING the past year, William L. Hughson Company of San Francisco and Los Angeles, the largest and earliest established Ford dealer on the Pacific Coast, has proved again and again the sales-bringing power of special merchandising stunts—each stunt planned not only to attract public attention, but to attract the right kind of attention.

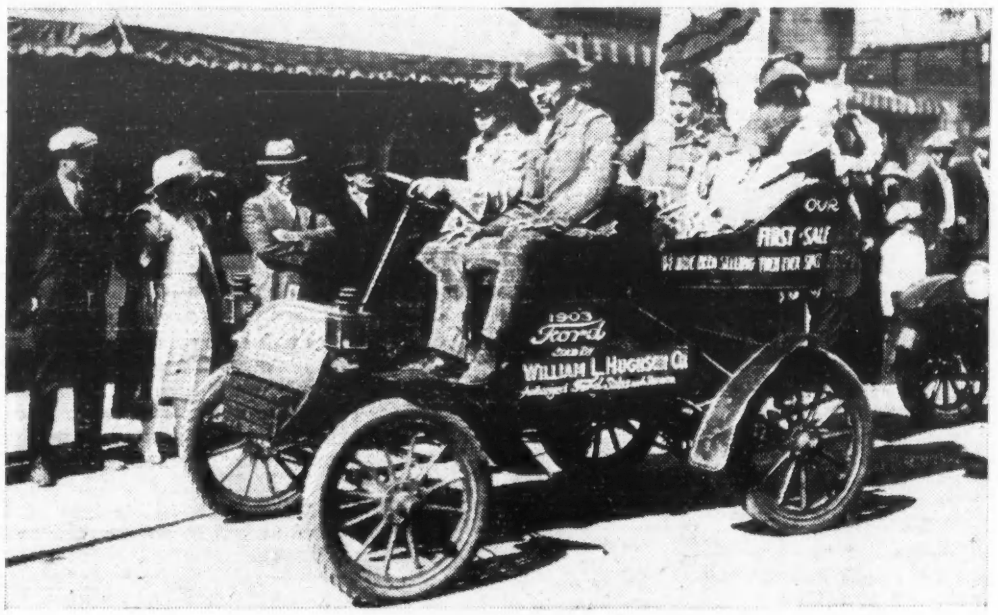
Not to review the mileage-guessing contest in the salesroom windows, calliopes announcing used car sales, participating in the sponsorship of a model-building contest, the most successful of them all was the driving of 1903 Fords through the streets after decorating them with appropriate wording.

The three-fold object of this stunt is to (1) broadcast the long-established nature of the William L. Hughson Company, the sign reading, "Our first sale—we have been selling them ever since"; (2) to impress on the public mind the lesson of the durability of the car; the fact that a 1903 model Ford is in running order is further accentuated by the lettering in front, "Ford, the durable car"; (3) to show by contrast the progress made in the building of automobiles—and of Fords especially, of course—during the past 27 years.

To complete the picture, the driver is rigged up in 1903 goggles, gauntlets and "driver's cap," while the passengers are dressed in the height of 1903 fashion.

This stunt has been used with marked success in both San Francisco and Los Angeles, and the firm has had and has accepted many calls to place this car in parades, in local automobile shows and the like.

How Ford Dealer Merchandises New Cars



Driver and guest riders dress the part when Hughson's 1903 Ford parades the streets of San Francisco and Los Angeles

Attractive Co-operative Christmas Ad

Santa Says: BUY A GIFT

— For the Whole Family —

A Dependable USED CAR

And Buy It From A NEW CAR DEALER

You Can Be Assured of Real Service and Dependability

GRAND DAD

GRAND MA

FATHER

MOTHER

JUNIOR

SISTER

Packard USED CAR DEPT. 350 GEORGE ST.

3-Day Sale of

High-Grade Used Cars

With all the appearance of New Cars and priced so very reasonably, we know you cannot resist buying if you see them.

1929 PACKARD 5-PASS. SEDAN, Model "626"
1925 MARMON 4-PASS. COUPE
1927 HUDSON SEDAN
1929 FORD PICKUP
1927 DODGE ½-TON PANEL
1928 CHRYSLER 8 SEDAN, Model "72"
1927 CHRYSLER SEDAN, Model "70"
1929 CHRYSLER SEDAN, Model "75"
1928 PACKARD CONV. COUPE, Model "526"
1926 PACKARD CLUB SEDAN, Model "243"
1929 CHANDLER 5-PASS. SEDAN
1929 ESSEX COUPE
1928 PACKARD SPT. PHAETON, Model "443"

And many others to select from

EASY TERMS ARRANGED
TRADES ACCEPTED

PACKARD SALES & SERVICE

150 George Street Telephone 3-1442

Open Evenings and Sundays

PRE-INVENTORY SALE OF USED CARS

Trades Accepted — Easy Terms — All Makes of Cars, at the Lowest Prices

NOW SAVE UP TO $500 on Brand New FRANKLINS

SEE THEM AT Cowles Tolman & Sons' 700 STATE ST.

$5 Down
$5 Per Week
90 Cars to Choose From

Reconditioned Franklins at reduced prices. All our stock must be reduced before inventory. Come in and see for yourself. Your dollar will buy more now than ever before. This sale will positively last only two weeks.

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700 STATE STREET
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BUY A CAR FROM

Cooley Chevrolet Co.

and have a Xmas Present which will make the whole family happy the whole year round.

LOOK OVER OUR BIG VALUES

1930 Chevrolet Coach	$399
1930 Chevrolet Sport Rds.	398
1930 Chevrolet Sedan	475
1929 Chevrolet Sedan	349
1929 Chevrolet Coach	296
1929 Chevrolet Coupe	298
1928 Chevrolet Sedan	252
1928 Chevrolet Coach	247
1927 Chevrolet Sedan	125
1930 Ford Coupe	397
1930 Ford Roadster	365
1929 Ford Coupe	276
1929 Ford Sport Roadster	227
1929 Essex Sport Coupe	231
1928 Willys-Knight Sedan	389
1928 Essex Sedan	145

100 others for you to choose from.

All makes and models.

$25.00 and up

On with Yuletide Spirit.

TERMS *On with the "Yuletide" Spirit! Pick out your Car—We will arrange terms to suit your convenience . . .*

Cooley Chevrolet Co.

158 Whalley Avenue

Phone 7-3900

Prices SCALED DOWN to the limit on all

USED CARS

Every used car we offer is a real sound, reconditioned car. Only the understanding of our used car showrooms makes these prices possible. Take the opportunity to buy your transportation at lowest possible cost. There are many thousands of miles of good use left during in every one of these cars. Our responsibility for your satisfaction continues after sale.

1930 CHRYSLER 77 CONVERTIBLE COUPE
1930 CHRYSLER 75 CONVERTIBLE COUPE
1929 CHRYSLER 75 COUPE, R.S.
1929 PLYMOUTH SEDAN
1929 CHRYSLER 65 SEDAN
1927 CHRYSLER 70 SEDAN
1926 CHRYSLER 70 ROADSTER
1928 NASH CONVERTIBLE COUPE
1927 PACKARD 4-26 PHAETON

Liberal Allowances—Easy Terms

Biever Motor Car Co.

138 Whalley Avenue New Haven, Conn.

OPEN EVENINGS Phone: 7-3073—4—5

Xmas Specials in Good Used Cars AT VERY LOW PRICES

1928 STUDEBAKER COMMANDER VICT.
1928 STUDEBAKER COMMANDER ROADSTER
1925 CADILLAC COUPE, 4 PASS.
1928 STUDEBAKER COMMANDER SEDAN
1926 MARMON SEDAN, 5 PASS.
1926 MARMON SEDAN, 7 PASS.
1928 STUDEBAKER PRES. SEDAN, 6 wire wheels
1927 PONTIAC COACH
1928 STUDEBAKER ½ TON PANEL DELIVERY
1926 STUDEBAKER DICTATOR ROADSTER
1929 ½-TON PANEL DELIVERY
1926 STUDEBAKER STD. DUPLEX
1926 NASH ADVANCED SIX
1929 STUDEBAKER PRES. 5 Pass., 6 wire wheels
1927 ESSEX COACH
1929 PLYMOUTH ROADSTER
1927 HUDSON BROUGHAM
1930 FORD COUPE
1930 DESOTO SEDAN
1928 CHEVROLET COUPE
1925 PACKARD LIMOUSINE
1925 CADILLAC SEDAN
1928 DURANT COUPE, RUMBLE SEAT
1930 PLYMOUTH BUS. COUPE
1929 FORD COACH
1929 DESOTO SEDAN, 6 wire wheels

H. Goldman & Sons, Inc.

105 GOFFE STREET

TELEPHONE 3-5000

A USED CAR as a Christmas present was the idea featured in co-operative full-page advertising carried by five New Haven, Conn., dealers in local newspapers. The copy stressed the advisability of buying used cars from new car dealers. The dealers participating were Cowles, Tolman & Sons, Franklin; Cooley Chevrolet Company, Packard Sales & Service, Biever Motor Car Company, Chrysler, and H. Goldman & Sons, Inc., Studebaker

CALIFORNIA EDITOR WINS PLYMOUTH ESSAY CONTEST

Detroit, Dec. 24.—The Plymouth essay contest has come to an end and the judges, Floyd Gibbons, Edgar Guest and Thomas P. Henry, have awarded first prize to I. H. Sefton, editor of the Colfax, Cal., Record, a country newspaper. The subject of the essay was "Why I Should Buy a Plymouth," and the prize is an annuity of $1,000 per annum for the rest of his life. There were 1,011 prizes in all and hundreds of thousands of essays were submitted.

FRANK MOSBACHER, INC., MOVES TO OKLAHOMA CITY

Wichita, Kan., Dec. 24.—Frank Mosbacher, for the past eight years vice-president and treasurer of the Mosbacher Motor Company, here, distributor of Hudson and Essex automobiles, soon will be dealer for the same line in Oklahoma City, he announced upon his arrival home from Detroit. He will head his own company to be known as Frank Mosbacher, Inc. His territory will include thirty-three counties adjacent to Oklahoma county and extending west to the state line and south to the border.

CHEVROLET MEETING IN RALEIGH, N. C., IN JANUARY

Charlotte, N. C., Dec. 24.—Announcement is made that Chevrolet dealers and salesmen from the eastern and central districts will hold a business meeting in Raleigh early in January. It is expected that approximately 700 men will be in attendance.

NEW CHEVROLET FIRM

Rochester, N. Y., Dec. 24.—The Cool Chevrolet Corporation, recently organized and incorporated by C. L. Cool, H. W. Ungerer and associates, has taken over the operation of the salesroom and service station of the Burch Chevrolet Corporation at 640 Culver Road.

H. C. MAYS RESIGNS

Boston, Mass., Dec. 24.—Harry C. Mays has resigned as sales manager of the Franklin Automobile Company of Boston, after nearly five years association with this organization. Members of the sales force presented him with a handsome wrist watch.

OGLE & DAVIS, INC., FORMED AS STUDEBAKER DEALER

Aberdeen, Wash., Dec. 24.—Announcement of the formation and incorporation of Ogle & Davis, Inc., at 212 West Market St., here, as Studebaker dealer for the Grays Harbor district, has just been announced.

RADIO IS ASSET IN SELLING CARS

San Antonio Dealers Use This Medium to Move Used Stock

SAN ANTONIO, Tex., Dec. 24.—Radio advertising has proven a successful means of disposing of used cars among the local dealers of this city. Several automotive firms have been using radio as a means of stimulating sales for several months with worthwhile results. Prominent among these is the Winerich Motor Sales Company, Studebaker distributors, who have this to report:

"Radio advertising has proven one of the most logical means of boosting used car cales from day to day," O. E. Lancaster, general sales manager, stated. "We have special sales in which we offer a group of cars at $39.59, or 68.88. These are cars that have accumulated, and we put a good price on them to clear them out of the way and make room for better merchandise. For this purpose we use handbills with excellent results. We can distribute these in the localities where the largest number of prospects for such cars are available, and we always have good results.

"Our radio program consists of entertainment with general and specific announcements interspersed between the selections. As a leader we will give a description of some snappy used car we have on the floor, and follow it up by a short announcement of other models that are to be sold. The leader will sell the first thing the next morning, and we will have other sales during the day.

"This radio program is broadcast from 6.30 p. m. to 7.30 p. m. on Wednesday and Friday nights over KONO, a local radio station that broadcasts only local receptions. This station is a small one, but suits our purpose since we are catering only to local trade. If we were to use a larger station, we would have to pay a much larger rate, and would be paying for a national program for a local purpose.

"Auction sales do not prove satisfactory, for the public is no longer aroused by them, and the dealer must either plant bidders in the crowd to get a fair price, or must let them go at the highest bid, which is usually far below what should be secured. The plan is unfair to the bidder and unfair to the dealer, and in many cases does more harm than good.

"Newspaper advertising has some effect. There is the disadvantage, however, of having your ads appear alongside of those of other dealers, thus making up a shoppers' list. Should you have a 1928 model of a car that is in good condition, worth, say, $300, and another dealer has one of the same model that has seen more service, and worth only $150, the two ads give the impression that you are charging too much.

"Our broadcasting period catches the family while they are around the supper table, where they can all talk car, and is one of our best mediums for getting real results. This, together with our annual clearance sales, whereby we sell cars at $68.88, etc., practically comprise our methods. We do, however, advertise consistently, and I believe hard work is the best formula for getting results in any line."

W. P. FLYNN IN CHARGE OF SERVICE DEPARTMENT

Cleveland, Dec. 24.—Walter P. Flynn has been placed in charge of the service department of the C. A. Wise Motor Company, Studebaker and Pierce-Arrow dealer at West 117th Street and Clifton Boulevard. Hugh Hoffer, formerly a Studebaker factory district service manager in Texas, has been made Mr. Flynn's assistant.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

Entered as second-class matter August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879.
2716 Graybar Bldg., New York, N. Y. Telephone MO hawk 4-6388

Circulation—Net paid Average over 10,000 daily guaranteed.
Member A. B. C.

FRIDAY, DECEMBER 26, 1930

ADVERTISING AND BUSINESS HEADQUARTERS

Harry A. Tarantous, Business Manager. J. Edward Schipper, Eastern Manager.
George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

EDITORIAL DEPARTMENT

350 Hudson St., New York, N. Y. Telephone CA nal 6-1000.
Alexander Johnston, Editor. William C. Callahan, News Editor.
Detroit Bureau—Chris Sinsabaugh, Editor, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500. Contributing Editor, John C. Wetmore. A. Benson Carleton, Technical Editor.

Mail subscriptions to CIRCULATION DEPARTMENT—C. H. Wilson, Manager.
1926 Broadway, New York, N. Y. Telephone TR afalgar 7-4500
Subscription Rates—One year, $12.00; two years, $20.00, for United States and Canada. To Foreign Countries—One year, $15.00; two years, $26.00. Single copies, 5 cents.

A Christmas Message

IN a radio talk, delivered a night or so ago, Alfred P. Sloan, Jr., president of General Motors, sent a ringing Christmas message to the members of his organization and their families all over the world. Naturally at a time such as the present, Mr. Sloan dwelt upon the position of industry and its opportunities. He set forth in no uncertain terms the principles upon which industry must build.

Emphasizing the need for frankness with its stockholders, who in effect own industry, Mr. Sloan cited the duty of protecting the workers and enabling them to provide during activity for the year of reduced efficiency. Continuing Mr. Sloan said: "It must mitigate the evils of unemployment. It must develop a better adjustment in the relationship of production and consumer demand. It must establish a broader appreciation of the fact that the foundation of industry is real and effective service to the community."

Touching on the immediate present, Mr. Sloan said: "There is no cause for discouragement. Similar conditions have been with us before, perhaps different in circumstances, but alike in principle. No one can possibly prophesy with any degree of certainty as to when a change will take place, but no one will deny that it is only a question of time. Out of all is sure to come a better order of things and eventually greater heights of prosperity than any we have yet enjoyed."

There is much sound thinking in Mr. Sloan's Christmas message and it is worth earnest study by industrial America.

'Employ Until It Hurts'

UPON a recent occasion Paul Hyde Bonner, well known figure in the silk industry, remarked that "Employment is the one cure for unemployment." Standing by itself this statement is about as obvious as saying "two and two make four." It is Mr. Bonner's explanation that makes his remark anything but bromidic.

"Hang out a sign 'Help Wanted' on every factory in the country," says Mr. Bonner, "and thus immediately restore that lost market which is represented by the army of the unemployed, and you will bring about in two months, instead of two years, the substantial economic recovery of the country."

Then Mr. Bonner elucidates still further: "The policy of universal re-employment at any cost may not sound like the good American economic doctrine which requires dividends to be protected first, but I believe it will assure greater security to the stockholders in the long run. 'Employ until it hurts' is a slogan which might well be used to express the determination of American business to recover in the face of odds."

Analysis of Mr. Bonner's suggestion makes newly plain the primitive form in which our economic structure still exists. If that economic structure were a highly organized entity, it would be possible to determine exactly what market would be created by putting two million or five million or six million workers back in the plants and when that market could be anticipated. Every company could determine to a dollar the cost of returning workers and the day on which renewed buying would begin to return to it the money expended in wages.

As it is, we know that unemployment has emasculated our buying power. We know that with all workers back on the pay rolls, the buying power of the country would return to what we bravely call "normal." The unknown factor is the cost of putting the workers back at work, including the period needed between employment and renewed sales. When the economic millennium comes, every factor to the situation will be known and we can eliminate unemployment and wipe out business cycles.

At any rate, Mr. Bonner's suggestion is a brave gesture. Would that it could be acted upon.

EXPORTS OF AUTOMOBILE POLISHES FOR 9 MONTHS

Washington, Dec. 24.—A report issued by the Department of Commerce states that automobile polishes exported for the first nine months of 1930 totaled $302,468.

The eight largest purchasers were: France, $31,982; Canada, $27,035; Germany, $25,279; United Kingdom, $20,421; Union of South Africa, $17,172; British India, $13,434; Australia, $12,233, and Italy, $11,596.

GIVE EMPLOYEES 5% ON ANNUAL EARNINGS

Elizabeth, N. J., Dec. 24.—C. B. Barrington, vice-president of Jenkins Brothers, announced today that employees in their rubber division in this city and the valve division in Bridgeport, Conn., on the pay roll December 1, received a Christmas gift of 5 per cent. of their total earnings for the year. This gift amounts to more than $50,000 and was distributed to about 550 employees.

OKLAHOMA OIL PRORATION HEARING SET FOR DEC. 29

Oklahoma City, Dec. 24.—Hearing on petition of an operators' committee, headed by Wirt Franklin, for continuation of the oil proration program in Oklahoma during the first quarter of 1931 has been set for December 29 by the state Corporation Commission.

COMING EVENTS

JANUARY

3-10—**New York.** National Automobile Show.
5—**New York.** Rubber Manufacturers' Association convention.
6—**New York.** National Automobile Chamber of Commerce annual show banquet at Hotel Commodore.
5—**New York City.** National Automobile Dealers' Association convention.
7-10—**East Orange, N. J.** Automobile Show of the Oranges and Maplewood.
8—**New York City.** Society of Automotive Engineers' annual dinner.
10-16—**St. Louis, Mo.** National Roadbuilders' show and convention.
10-17—**Buffalo, N. Y.** Automobile Show.
10-17—**Milwaukee, Wis.** Automobile Show.
10-17—**Philadelphia.** Automobile Trade Association annual show.
10-17—**Newark, N. J.** Automobile Show.
11-17—**Cincinnati, O.** Automobile Show.
13-17—**Evansville, Ind.** Automobile Show.
17-24—**Boston.** Automobile Show.
17-24—**Detroit, Mich.** Annual Show. Convention Hall.
17-24—**Hartford, Conn.** Automobile Show. at state armory.
17-24—**Montreal, Can.** National Motor Show of Eastern Canada at Stadium.
17-24—**Baltimore, Md.** Automobile Show.
17-24—**Pittsburgh, Pa.** Automobile Show.
19-22—**Chicago.** National Wheel and Rim Association convention at Edgewater Beach Hotel.
19-24—**Detroit, Mich.** Society of Automotive Engineers' annual meeting.
19-24—**Omaha, Neb.** Automobile Show.
19-24—**Elmira, N. Y.** Automobile Show at Armory.
19-24—**Omaha, Neb.** Automobile Show.
19-24—**Louisville, Ky.** Automobile Show.
19-24—**Rochester, N. Y.** Automobile Show.
24-31—**Chicago, Ill.** National Automobile Show.
24-31—**Altoona, Pa.** Automobile Show at Jaffa Shrine Mosque.
24-31—**Allentown, Pa.** Automobile Show sponsored by Lehigh Automobile Trade Association.
24-31—**Cleveland.** Automobile Show.
24-31—**Washington, D. C.** Automobile Show
24-31—**Albany, N. Y.** Automobile Show.
24-Feb. 1—**Los Angeles.** Automobile Show.
26-27—**Chicago.** National Automobile Dealers' Association convention.
26-31—**Springfield, Mass.** Automobile Show.
26-31—**Syracuse, N. Y.** Automobile Show at Armory.
26-31—**Portland, Maine.** Automobile Show at Exposition Building.
31-Feb. 7—**San Francisco.** Automobile Show.

FEBRUARY

Jan. 31—Feb. 7—**Twin Cities.** Northwest Automobile Show, jointly sponsored by St. Paul and Minneapolis at the Minnesota State Fair Grounds.
2-7—**Scranton, Pa.** Automobile Show.
2-7—**St. Louis.** Automobile Show.
3—**Minneapolis.** Auto Trade Association convention.
7-14—**Los Angeles.** Automobile Salon.
7-14—**Kansas City.** Automobile Show.
9-14—**St. Petersburg, Fla.** Automobile Show at Winter Garden.
9-14—**Duluth, Minn.** Twin Ports Automobile Show, held by Duluth and Superior, Wis., dealers.
9-14—**Denver, Colo.** Automobile Show.
11-13—**Chicago, Ill.** American Society of Mechanical Engineers' fuel meeting.
14-19—**Indianapolis.** Automobile Show at State Fairground.
16-20—**San Francisco.** Society for Steel Treating National Western Metal and Machinery Exposition.
21-28—**San Francisco.** Automobile Salon.
21-28—**Quebec, Canada.** Automobile Show.
22-March 1.—**Los Angeles.** Pacific Coast Transportation. Exposition at Shreve Civic Auditorium.
23-28—**Des Moines, Ia.** Automobile Show at Coliseum.
24-March 1—**Seattle, Wash.** Automobile Show at Civic Auditorium.
25-March 2.—**Camden, N. J.** Automobile Show.

MARCH

6-15—**Geneva, Switzerland.** Eighth Swiss International Automobile Show.
7-14—**Brooklyn, N. Y.** Automobile Show.

MAY

4-9—**Charlotte, N. C.** Good Roads Convention.
9-Aug. 9—**Berlin, Germany.** International Garage Exposition.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Contemporary Comment

THE year-end holiday and inventory period, now at hand, will bring a further reduction in steel plant operations, in some cases amounting to complete suspension for several days. For the first half of the week steel ingot output will average barely 35 per cent., compared with 38 per cent. a week ago, but the irregularities in production between now and January 5 may drive the figure below 25 per cent.

The decline in operations will be in line with expectations and has been discounted by the trade. Of greater present interest is a continued improvement in steel specifications for January shipment, pointing to an upturn in activity early in the new year. Releases in heavy hot-rolled products, in fact, have been heavier so far in December than in November for some mills, the gain for one important producer amounting to 30 per cent.

Some measure of recovery from the unusually sharp curtailment in automobile manufacture is assured. The Rouge and Canadian plants of the Ford Motor Company shut down December 17, to remain inactive until January 5, and December output of the industry in this country and the Dominion is now estimated at 100,000 to 110,000 cars, by far the lowest monthly output since 1921.

The Iron Age composite prices are unchanged this week, that for finished steel being 2.121 cents a pound, pig iron, $15.90 a gross ton and heavy melting scrap, $11.25 a ton.—**Iron Age.**

NORFOLK & SOUTHERN ATTACKS UNREGULATED TRANSPORTATION MEANS

Washington, Dec. 24.—Unregulated motor vehicles were attacked by the Norfolk & Southern Railroad.

In a brief filed with the Interstate Commerce Commission, the railroad claims its revenues have shown a constant and sharp decline with the increase in the operations of motor trucks.

The brief adds that "Motor vehicles operating on public highways, built at the expense of the public, in the absence of regulation and control by some government agency are not in the interest of the commerce of the United States."

It was further asserted that "such unregulated facilities of transportation are a menace and a burden to the country as a whole."

AMERICANS SPEND HUGE SUM ON TRAVEL IN 1930

Washington, Dec. 24.—The American Automobile Association today estimated that $5,000,000,000 was spent for travel by Americans at home and abroad during this year.

Of this amount, close to $325,000,000 was spent by Americans entering Canada in more than 5,600,000 motor cars.

This Is for Everyone Who Comes to the National Shows

WHEN you are in New York to attend the automobile show, do not fail to get a copy of the Automotive Daily News each day at your hotel newsstand, floor clerk or the bell captain.

At the show itself copies will be distributed to the booths, or you may obtain one from our booth.

There is NO CHARGE for the show issues distributed in New York.

Editorial Office
350 Hudson Street
New York
Telephone CA nal 6-1000

AUTOMOTIVE DAILY NEWS
Advertising and Business Office
2716 Graybar Building New York
Telephone MO hawk 4-6388

WEEKLY BUSINESS INDICATORS

REPRODUCED BY ARRANGEMENT WITH THE SURVEY OF CURRENT BUSINESS

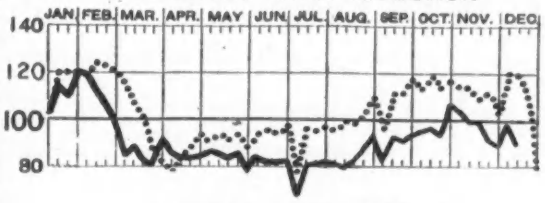
U. S. DEPARTMENT OF COMMERCE

DATA PLOTTED, WHERE AVAILABLE FOR WEEK ENDING DECEMBER 20, 1930

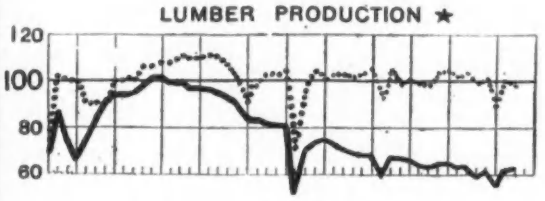
WEEKLY AVERAGE, 1923-1925, INCLUSIVE = 100

~LEGEND~
1929
1930

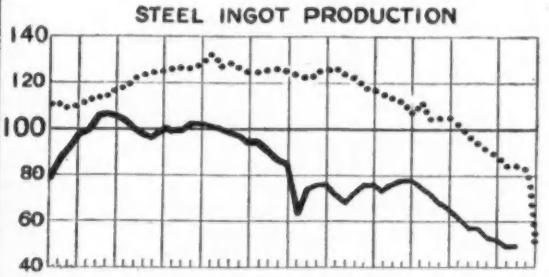
BITUMINOUS COAL, PRODUCTION



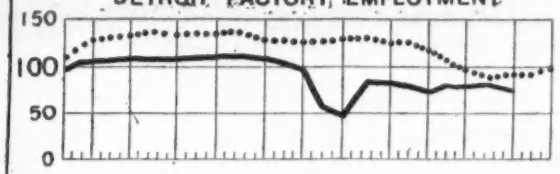
LUMBER PRODUCTION ★



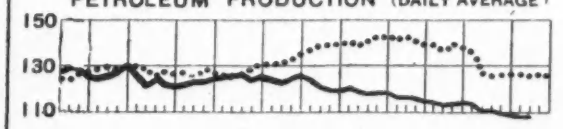
STEEL INGOT PRODUCTION



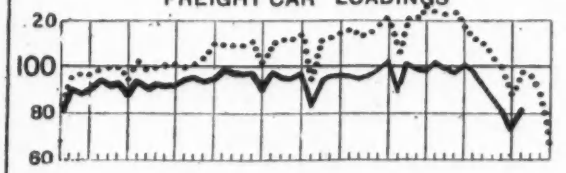
DETROIT FACTORY EMPLOYMENT



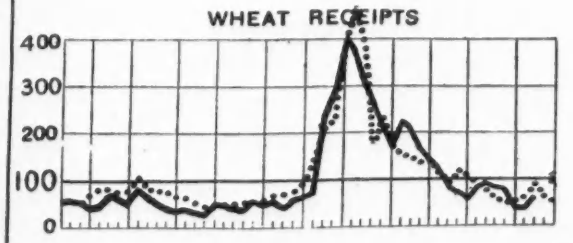
PETROLEUM PRODUCTION (DAILY AVERAGE)



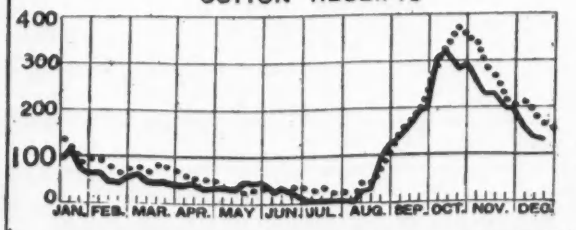
FREIGHT CAR LOADINGS



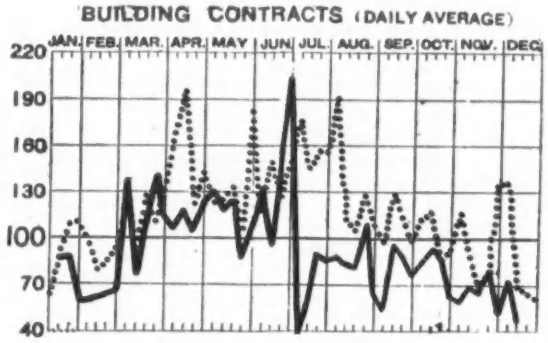
WHEAT RECEIPTS



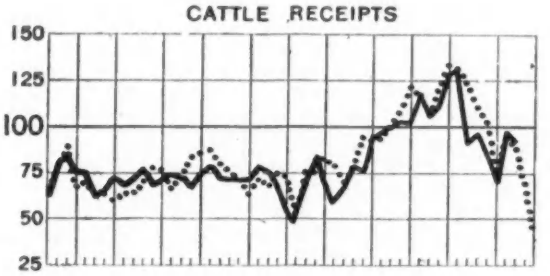
COTTON RECEIPTS



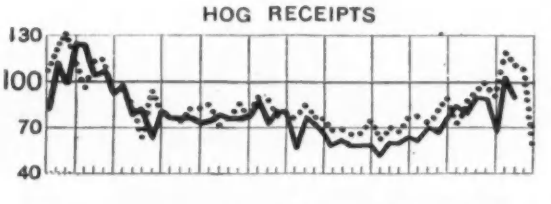
BUILDING CONTRACTS (DAILY AVERAGE)



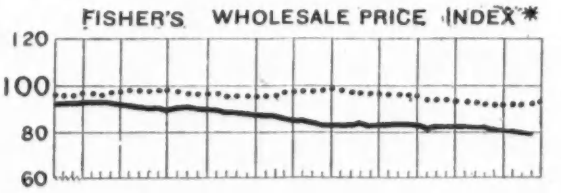
CATTLE RECEIPTS



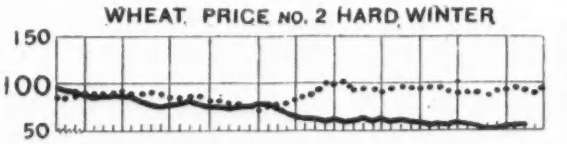
HOG RECEIPTS



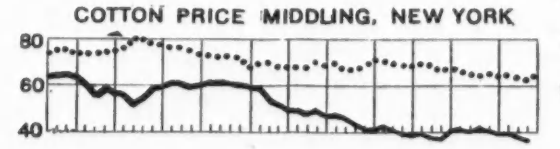
FISHER'S WHOLESALE PRICE INDEX*



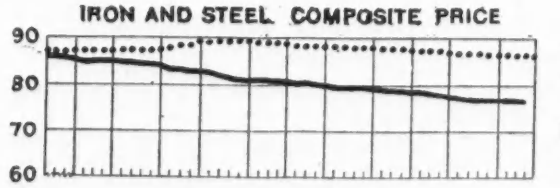
WHEAT PRICE NO. 2 HARD WINTER



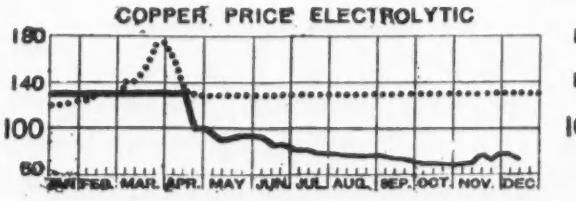
COTTON PRICE MIDDLING, NEW YORK



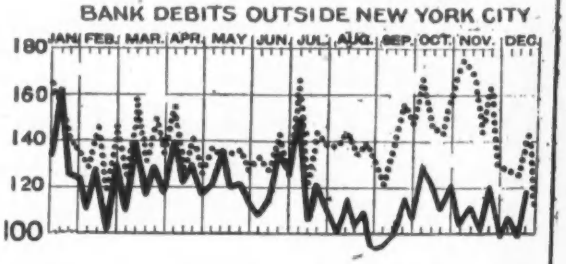
IRON AND STEEL COMPOSITE PRICE



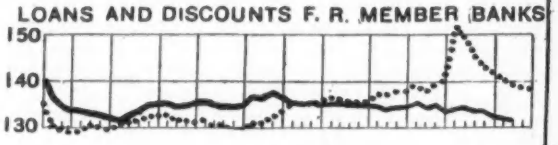
COPPER PRICE ELECTROLYTIC



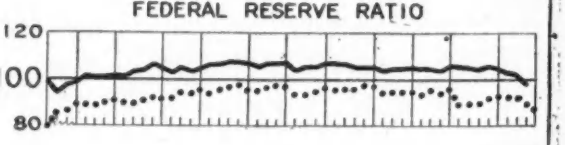
BANK DEBITS OUTSIDE NEW YORK CITY



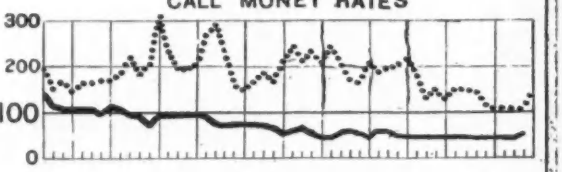
LOANS AND DISCOUNTS F. R. MEMBER BANKS



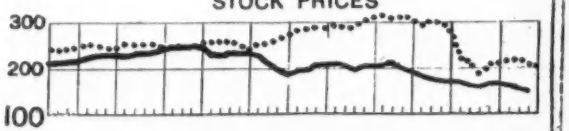
FEDERAL RESERVE RATIO



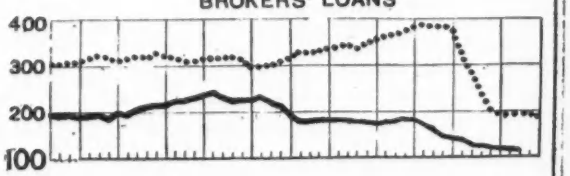
CALL MONEY RATES



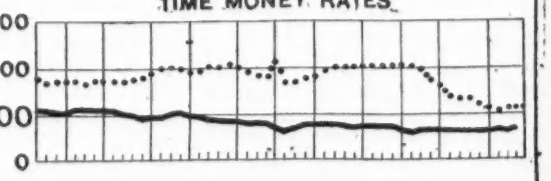
STOCK PRICES



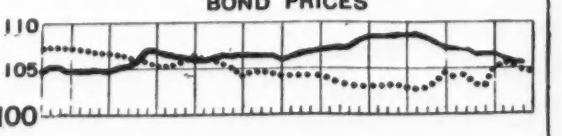
BROKERS' LOANS



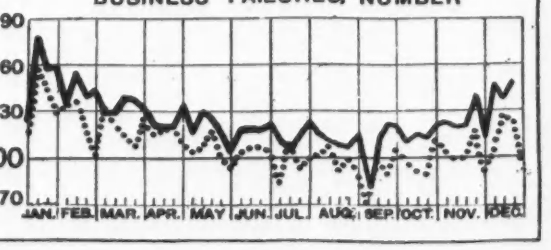
TIME MONEY RATES



BOND PRICES



BUSINESS FAILURES, NUMBER



★ RELATION TO WEEKLY AVERAGES 1927-1929 PER WEEK SHOWN. * RELATIVE TO 1926 = 100

Service Notes

R. D. BOOTH APPOINTED

Joplin, Mo., Dec. 24.—Robert D. Booth, formerly of Kansas City, has been appointed as manager of the Gateway Tire Company, recently established Goodyear agency for Joplin and the Four-State district. The company opened here in August.

S. O. TO BUILD HANGAR

Newark, N. J., Dec. 24.—Standard Oil Company of New Jersey has asked bids on general contract for a one and two-story hangar at Newark Airport, with reconditioning and repair facilities, to cost about $30,000 with equipment.

WILL LOCATE IN BUFFALO

Canandaigua, N. Y., Dec. 24.—The Automatic Electric Radiator Company, Inc., at present located in Buffalo, manufacturing a line of automotive specialties, has acquired a portion of the former plant of the Canandaigua Brewing Company in Buffalo Street here. Plans are under way for removal of machinery and equipment from Buffalo to this city, where it is expected to begin production on a quantity basis within six weeks.

BOSCH MEN TRANSFERRED

Springfield, Mass., Dec. 24.—Many key men of the Robert Bosch concern have already come to Springfield and others will arrive soon.

A large force has been busy for several weeks making necessary changes to accommodate the new United American Bosch.

MOTOR TRUCK BILL TO BE PROPOSED IN TEXAS THEME OF CONFERENCE

Houston, Tex., Dec. 24.—Members of the legislative committee of the Texas A. A. A. met here recently to consider needs of the motor transport industry.

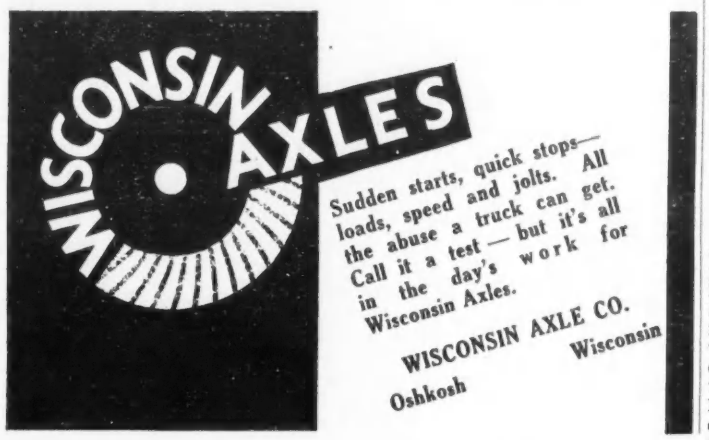
The meeting was well represented by motor truck carriers, transfer and warehouse men and motor bus operators.

The hearing was called as a preliminary measure in preparing a rough draft of a bill to be presented before the legislature regulating such vehicles in their use of Texas highways.

Compulsory liability insurance for both operators and drivers was suggested to provide protection against accidents, but was considered unconstitutional.

Statement that the roads should be built for industry and not industry fitted to the roads, in answer to a complaint that many trucks were heavily overladen, was met with the reply that such roads as are now existant should be saved for that vast majority of motor car owners for whom, primarily, they were constructed.

J. C. Carrington of Austin, secretary of the Texas Bus Owners' Association, filed a statement which declared that trucks and buses comprise one-eighth of the vehicles on the highways, but pay one-third of the money that goes to the state for road building and maintenance.


WISCONSIN AXLES
Sudden starts, quick stops—loads, speed and jolts. All the abuse a truck can get. Call it a test — but it's all in the day's work for Wisconsin Axles.
WISCONSIN AXLE CO.
Oshkosh
Wisconsin

TRACTOR OUTLOOK FOR 1931 IMPROVING, SAYS GITTINS

Racine, Wis., Dec. 24.—Looking ahead into 1931, business looks better, in the opinion of E. J. Gittins, chairman of the board of the J. I. Case Company, which is finishing work on an order for 4,000 tractors for shipment to the Soviet government. Production on the order started last September. Last year the company sold 1,300 tractors to the Russians. It is now planned to send twelve service men to instruct the users of the machines. At the company's tractor works, south of this city, about 1,500 men are employed.

APPROVE STOCK ISSUES

Trenton, N. J., Dec. 24.—Issuance of $60,000 in stock by four bus corporations operating in and around Red Bank has been approved by the State Board of Public Utility Commissioners. Borough Buses, Inc., will issue $32,000 par value common capital stock; Boro Buses Corporation, $12,000 common capital stock; Boro Buses, Ltd., $8,000 common capital stock, and Boro Buses Company, $8,000 capital stock.

N. Y. TRUCK DEALERS DISCUSS TAXATION

New York, Dec. 24.—A mid-winter meeting of the Motor Truck Division of the Automobile Merchants Association of New York, Inc., was held at the New York Athletic Club on Thursday. The first vice-president, H. Happersberg, in charge of the Motor Truck Division, presided.

Lee J. Eastman, president of the association, discussed with those present the various activities of the association as they applied to that very important arm of the association—the Truck Division.

Mr. Eastman gave facts and figures regarding gasoline taxes from a national point of view and as it affected the state of New York. He also drew the attention of those present to the hearings which has been held throughout the state of New York by the Mastick Tax Commission which commission were making a survey of the tax situation of the state of New York and would make their report to the 1931 Legislature. Mr. Eastman advised that the association had made their recommendations and suggestions and that this commission had assured their thoughtful consideration of those recommendations.

E. F. Loomis, secretary of the Motor Truck Committee of the National Automobile Chamber of Commerce made a very interesting and entertaining speech on motor vehicles and the present position of motor vehicles, as compared with railroads.

In the Bus Field

JOSEL CO. ORGANIZED

Jersey City, N. J., Dec. 24.—The Josel Bus Company has been organized by Abraham Joselowitz, Mayer Joselowitz and Ida Joselowitz, Bayonne.

FORM M'LEOD BUS LINE

Tampa, Fla., Dec. 24.—McLeod Bus Line has been incorporated here with a capital of $10,000. The board of directors is composed of C. McLeod, L. Quarles and W. P. Rogers.

GET A. C. F. BUSES

Paterson, N. J., Dec. 24.—Emil Bernhardt, of the Inter-City Transportation Company, and six drivers have returned from Detroit, where they went to get the remaining six nek A. C. F. de luxe buses for the Paterson-Passaic-New York line. TheInter-City men now have a fleet of eighteen new buses plying between here and New York.

11 MONTHS' REVENUE

Lincoln, Neb., Dec. 24. — Buses operated by the Lincoln Traction Company brought in a revenue of $137,679 for the first eleven months of 1930, as compared with a revenue of $238,618 from the company's street cars. The company operated at a loss of $179 a day during the eleven months.

Cumulative New Commercial Car Registration Statistics, November, 1930

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers.

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers desiring county, city or town lists, or lists of owners in any given section, may obtain these by addressing any of these three companies.

Commercial Car Registrations do not include buses.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	F. W. D.	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Arkansas			24		3					40	1	6											1				75	Arkansas
Conn.	2	5	67	12	35	3		1	6	180	7	21	17	1	2	10			1	4	9		3	3		7	396	Conn.
Delaware	1		10	3		1				34	2	3	2			1					2	1					60	Delaware
Florida		1	88		7				5	304	5	11		1		1		1					2	1			427	Florida
Georgia	1		57		3					135	1	5	1			2							4				209	Georgia
Idaho			43		5					100	1	14		1		2							1	1	1	1	170	Idaho
Illinois	4		240	34	61				13	385	5	44	7		2	4		3	2				2	4		23	833	Illinois
Maryland	3	5	69	1	18	1		1	2	182	5	20	7		1	4					2		12			6	339	Maryland
Michigan	5	4	190		26			2	12	523	13	22		1	2	8	5				6	1	1	1		18	840	Michigan
Minn.		1	127	6	27		1		2	261	10	47				5		1			11	4	1	3		8	515	Minnesota
Montana			13		5			1	1	43		10		1		1		1				1	1	3		1	82	Montana
N. Hamp.		1	22		3					81		1	1			1				1	2				1		114	New Hamp.
Nor. Car.			121		21	2				172	5	4	1			1							2	1		4	334	N. Carolina
Nor. Dak.			13		3			1		20		13				1					1						52	Nor. Dak.
Ohio	8	5	257	6	46	3			1	545	22	60	4		7	7		3	3	5	20	8	23	1	1	25	1060	Ohio
Oregon			41		3			1		133	1	4		1		2		1			4		1			2	194	Oregon
Rh. Island	2		21	2	8			1	4	76	4	3	1			5					2					2	131	Rh. Island
So. Car.			107		6			1		84	5	6				1							1			2	213	S. Carolina
S. Dakota			18	3	4					32	1	20															78	S. Dakota
Utah			32		13					87	2	11				3		1			1						150	Utah
Virginia	5	1	151	1	22				1	209	12	17	2			4	5	1			2		6	1		2	442	Virginia
Wash'ton			26		3					83	1	7				1					2		2	1		1	127	Wash'ton
West Va.			60	2	22					125	3	15	1	1	2	3	2				2	1	2	6			247	West Va.
Wisconsin			164	4	23			1	5	310	8	35	1	1		5		2	2		7	3	1	2		5	579	Wisconsin
D. of Col.	7		28	5	4					97	5	5	2		1	2							4			3	163	D. of Col.
Totals	38	23	1989	79	371	10	1	10	52	4241	119	404	47	8	17	74	12	14	8	10	73	19	70	28	3	110	7830	Totals
Ark., 1929			252	1	7			1		302	1	23	1		1	7						8	2			2	608	Ark., '29
Conn., '29	11	8	140	12	43	6		5	7	199	25	23	32			36	1			8	5	7	10		1	17	596	Conn., '29
Del., 1929		3	19		4			1		38	2	2															69	Del., 1929
Fla., 1929		2	163		11	3				247	1	9	1			5						3	2				447	Fla., 1929
Ga., 1929		2	115		9			1	2	179	12	17				7				1	1	4	7				357	Ga., 1929
Idaho, '29	1		51		12				1	78	2	11				3	2	1	1			3	2			2	170	Idaho, '29
Ill., 1929	3	2	173	20	59	1		10	5	620	31	68	6			30				3		16	12			95	1154	Ill., 1929
Md., 1929	4	8	92	9	30	2		2	2	159	17	17	14			11	1			1	1	2	20		2	6	400	Md., 1929
Mich., '29			135	2	32	1		3	4	505	14	40				18	1	1				3	3			7	769	Mich., '29
Minn., '29			197	3	28	2		6	1	369	9	74				16					2	18	5		2	7	739	Minn., '29
Mont., '29	3		34		10			4	1	49	1	12										2	2			1	119	Mont., '29
N. H., '29		1	37	1	6				2	80	5	8	1			5		1		1		1				2	157	N. H., 1929
N. C., 1929	2		163		28	1		1		229	11	7	1			2	1			1		9	2			7	465	N. C., 1929
N. D., '29			44		6			1		61	1	19				1		1				5					139	N. D., 1929
Ohio, '29	8	31	365	8	76	2		7	15	761	39	74	4		1	38	2	2	1	4	2	34	44		11	45	1574	Ohio, 1929
Ore., 1929	3		90		13			4	4	171	10	7	4			3		3	2			1	5			13	333	Ore., 1929
R. I., 1929	12	2	40	1	18			2	8	97	9	12	7			13			4	6			4			7	242	R. I., 1929
S. C., 1929			137		7			4	1	130	7	7				1					1	1	1			2	299	S. C., 1929
S. D., 1929			70		6			1		50		32				3						9					171	S. D., 1929
Utah, 1929			32		4			1		117	6	5				4		1					2			1	173	Utah, '29
Va., 1929	1	3	658		32			3	1	671	7	17			1	5	1	1			1	21	5			3	1431	Va., 1929
Wash., '29			57		8	2		2		153	5	7	4			4		2			1	1	4			4	254	Wash., '29
W. V., '29		5	80	2	29	1		2		135	9	12	1		1	4	1			1		3			1	2	289	W. V., '29
Wis., 1929			157	6	19	4		2	2	276	6	27	2			7			1	4	4	16	6			10	549	Wis., 1929
D. C., '29	14		19	2	5	1		1		95	9	4	1		1	3		1	1				5			8	170	D. C., '29
Totals	62	67	3320	67	502	26	†	64	56	5777	239	534	79	*	5	226	10	14	10	30	18	167	143	*	17	241	11674	Totals

*Not in production at that time. †Carried in miscellaneous column.

Major Specifications and Mechanical Details of 1930 Commercial Cars

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	No. of Cyls.	Bore and Stroke	Tax H. P.	Max. Brake H. P. at Specified R. P. M.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
*Am. La France Chief	2	3650	Own	6	3¾x5	33.0	65@2100	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	42@1400	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
*Am. La Fr. Chieft'n	3-4	5500	Own	6	4½x5½	40.8	75@1800	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	50@1200	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La Fr. Big Chief	6	6725	Own	6	4½x6	48.6	50@1200	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	50@1200	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Austin	—	475	Own	4	2.2x3	7.8	———	CS	Til	—	Aut	W-G	U	3	Sal	Sp	—	4	4	75	———	3 75x18	3.75x18
Autocar A	1½-2	3200	Own	6	4 x4¾	38.4	82@2400	Pw	Str	Vac	DR	Br-L 51	U	4	Own	Sp	27.9	4V	R	150	5060	34x7	34x7
Autocar D	2-2½	3500	Own	6	4 x4¾	38.4	82@2400	Pw	Str	Vac	DR	Br-L 51	U	4	Own	2R	33.7	4V	R	150	5300	34x7	34x7D
*Autocar SH	2½-3	4300	Own	6	4¼x4¾	43.4	92@2400	Pw	Str	Gra	DR	Own T	U	4	Own	2R	44.3	RV	R	114	6770	34x7	34x7D
Autocar SCH	2½-3	4300	Own	6	4¼x4¾	43.4	92@2400	Pw	Str	Vac	DR	Own T	U	4	Own	2R	44.3	RV	D	157	6860	34x7	34x7D
*Autocar H	3	4100	Own	4	4½x5½	32.4	45@1450	CS	Str	Gra	DR	Own T	U	4	Own	2R	48.6	RV	R	114	6770	34x7	34x7D
*Autocar HS	3½	4600	Own	4	4½x5½	32.4	45@1450	CS	Str	Gra	DR	Own T	U	4	Own	2R	53.6	RV	R	114	7900	40x8	40x8D
*Autocar SHS	3-3½	4800	Own	6	4¼x4¾	43.4	92@2400	Pw	Str	Gra	DR	Own T	U	4	Own	2R	65.3	RV	R	114	7900	40x8	40x8D
*Autocar SCHS	3-3½	4800	Own	6	4¼x4¾	43.4	92@2400	Pw	Str	Vac	DR	Own T	U	4	Own	2R	53.6	RV	D	157	8180	40x8	40x8D
Autocar TEA	3-3½	5350	Own	6	4¼x4¾	43.4	92@2400	Pw	Str	Vac	DR	Own T	U	12	Own	2R	101.7	4V	D	192	8900	36x8	36x8D
Autocar TFA	3½-5	6100	Own	6	4½x4¾	48.6	101@2400	Pw	Str	Vac	DR	Own T	U	12	Own	2R	101.3	4V	D	192	9300	38x9	38x9D
Autocar C	3½-5	5500	Own	6	4½x4¾	48.6	101@2400	Pw	Str	Vac	DR	Own B	C	4	Own	2R	61.7	RV	D	172	9500	42x9	42x9D
Autocar CG	5	8250	Own	6	4½x4¾	48.6	———	Pw	Str	Vac	DR	Own B	C	12	Tim	—	120	WB	D	196	13C00	36x8	36x8B
Autocar F	7½	6800	Own	6	4½x4¾	48.6	101@2400	Pw	Str	Vac	DR	Br-L 70	C	7	Tim	Wo	94.0	4V	D	173	11000	36x7S	40x8DS
Autocar G	10	9000	Own	6	4½x4¾	48.6	101@2400	Pw	Str	Vac	DR	Br-L 70	C	7	Tim	Wo	97.7	WB	D	171	13000	36x8	36x8D
Brockway 60	1	995	Con	6	3⅜x4	27.3	61@3000	Pb	Zen	P	Aut	W-G	U	3	Col	Sp	—	4	Tr	132	3200	30x5	30x5
Brockway 65	1	1195	Con	6	3⅜x4⅝	27.3	65@2700	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con	6	3⅜x4⅝	27.3	65@2700	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con	6	3⅜x4⅝	27.3	65@2700	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	149	3650	32x6	32x6
Brockway 120	2	1990	Con	6	4 x4⅛	38.4	73@2400	Pb	Zen	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2-2½	2495	Con	6	4 x4⅛	38.4	73@2400	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Brockway 141	2½	2935	Con	6	4 x4⅛	38.4	73@2400	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6200	32x6	32x6D
Brockway 170	2½	3160	Con	6	4⅛x4¾	40.8	89@2400	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Brockway 175	3	3660	Con	6	4⅜x4¾	45.9	100@2400	Pb	Zen	P	Aut	—	U	5	Wis	2R	—	4HV	D	170	7200	34x7	34x7D
Brockway 195	3-3½	3820	Con	6	4⅛x4¾	40.8	85@2400	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Brockway 190	3	4185	Con	6	4⅛x4¾	40.8	89@2400	Pb	Zen	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Brockway 220	3½-4	4560	Con	6	4⅜x4¾	45.9	112@2400	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8250	36x8	36x8D
Brockway 250	5	5950	Con	6	4⅜x4¾	45.9	100@2400	Pb	Zen	P	Aut	Br-L	U	4	Tim	Wo	—	4Hmv	D	182	10000	40x8	40x8D
Brockway 290	7½	7250	Con	6	4¾x5¾	54.15	116@1800	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7P	40x14S
*Brockway 640	10	9700	Con	6	4¾x5¾	54.15	116@1800	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	212	14000	38x7P	36x10S
Chevrolet	¾	355	Own	6	3⅛x3¾	26.3	———	CS	Car	P	DR	Own	U	3	Own	Sp	13.61	4	R	109	1835	4.75x19	4.75x19
Chevrolet	1½	590	Own	6	3⅛x3¾	26.13	———	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	157	2890	30x5	30x5D
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	50@2600	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	131	2375	30x5	30x5
Commerce Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	P30x5	P30x5
Commerce Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	P30x5	DP30x5
Commerce Series 40	1½	2990	Bud H S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	P34x5	DP34x5
Commerce Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6P	32x6D
Commerce Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	32x6	36x6D
Commerce Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6P	36x6L
Commerce Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	73@2000	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6P	36x6D
Commerce Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	73@2000	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6P	38x7D
Commerce Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	85@2400	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	B	D	175	8200	36x6S	36x12S
Commerce Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	85@2000	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	B	D	175	8400	36x6S	36x14S
Commerce Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	85@2400	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	B	D	175	9600	36x6S	40x14S
Day Elder 60	1	1195	Con 25 A	6	3⅜x4	27.3	61@3000	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	36.3	4	4	135	3200	20x6.00B	20x6.50B
Day Elder 85	1½	1645	Con 16 C	6	3⅜x4⅝	27.3	65@2700	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	42.3	4	4	135	3750	20x6.00B	20x6.50DB
Day Elder 110	2	2095	Con 16 C	6	3⅜x4⅝	27.3	65@2700	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	44.9	4	D	156	4600	20x7.00B	20x7.00DB
Day Elder 130	2½	2895	Con 16 R	6	4 x4⅛	38.4	75@2400	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	40.7	4	D	150	6400	20x7.50B	20x9 00DB
Day Elder 160	3	3695	Con 18 R	6	4 x4½	38.4	———	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	36.1	4	D	156	6600	20x7.50B	20x9.00DB
Day Elder 200	4	4295	Con 18 R	6	4 x4½	38.4	82@2400	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	43.5	4	D	156	7400	20x9.00B	20x9.00B
Day Elder 240	5	5500	Con 21 R	6	4⅜x4¾	45.9	100@2600	Pw	Zen	Vac	DR	Br-L	C	4	Tim	Wo	50.8	4	D	162	9300	38x9P	38x9DP
Day Elder 285	8	6000	Con 21 R	6	4⅜x4¾	45.9	100@2600	Pw	Zen	Vac	DR	Br-L	C	7	Tim	Wo	71.2	6	D	164	12000	20x8.25DB	20x8.25DB
Day Elder 345	10	7500	Con 21 R	6	4⅜x4¾	45.9	100@2600	Pw	Zen	Vac	DR	Br-L	C	7	Tim	Wo	79.9	4	D	164	12500	20x9.00DB	20x9.00DB
Day Elder 402	12	8500	Con 16 H	6	4¾x5¾	54.2	127@2300	Pw	Zen	P	DR	Br-L	C	7	Tim	Wo	84.6	4	D	164	14000	20x9 75B	20x9.75DB
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	57@3000	*Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3¾x4	27.3	61@3000	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135½	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	58@2400	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	66@2400	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	75@2400	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 596	2½	2820	Her WXC	6	4 x4½	38.4	75@2400	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 504	3	2925	Her WXC 3	6	4¼x4½	43.3	84@2200	Pb	Zen	Vac	Aut	Cov	U	4	Tim	2R	—	4	D	166½	6400	20x8.25B	*20x8.25DB
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	94@2200	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	94@2200	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	94@2200	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	———	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	98@2200	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	99@2200	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 wh 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	106@2200	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8D
Diamond T 1601	8	7500	Wak 6 R B	6	5 x5¾	60.0	126@1800	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	12500	36x8	4 wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 R B	6	5 x5¾	60.0	126@1800	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. UF10	½	435	Own	4	3⅝x4¾	21.2	48@2800	Pb	Car	P	DR	Own	U	3	Own	Sp	14.28	4	D	109	1855	5.00x19	5.00x19
Dodge Bros F10	½	515	Own	6	3⅛x4⅛	23 4	61@3400	Pb	Car	P	DR	Own	U	3	Own	Sp	14.28	4	D	109	1960	5.25x19	5.25x19
Dodge Bros. U1	¾	695	Own	4	3⅝x4¼	21 3	45@2800	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21.68	4	D	124	2260	5.50x20B	5.50x20B
Dodge Bros. DA1	¾	795	Own	6	3⅜x3⅞	27.3	63@3200	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. UF30	1½	595	Own	4	3⅝x4¾	21.0	48@2800	Pb	Car	P	DR	Own	U	4	Own	Sp	37.17	4	D	136	2665	6.00x20	32x6
Dodge Bros. F30	1½	695	Own	6	3⅛x4⅛	23.4	61@3400	Pb	Car	P	DR	Own	U	4	Own	Sp	37.17	4	D	136	2765	6 00x20	32x6
Dodge Bros. F35	1½	1425	Own	6	3⅜x3⅞	27.3	63@3200	Pb	Zen	P	DR	Own	U	4	Own	Sp	41.43	4	D	140	3780	6.00x20	6.00x20D
Dodge Bros. F36	1½	1485	Own	6	3⅜x3⅞	27.3	63@3200	Pb	Zen	P	DR	Own	U	4	Own	Sp	41.43	4	D	165	3972	6.00x20	6.00x20D
Dodge Bros. F40	2	1995	Own	6	3⅝x5	31.5	96@3000	Pb	Zen	P	DR	Own	U	4	Own	Sp	43.73	4	D	150	5175	6.50x20	6.50x20D
Dodge Bros. F41	2	2085	Own	6	3⅝x5	31.5	96@3000	Pb	Zen	P	DR	Own	U	4	Own	Sp	43.73	4	D	165	5211	6.50x20	6.50x20D
Dodge Bros. F60	3	2645	Own	6	3⅝x5	31.5	96@3000	Pb	Zen	P	DR	Own	U	4	Own	Sp	48.87	4	D	146	5543	32x6	32x6D
Dodge Bros F61	3	2575	Own	6	3⅝x5	31.5	96@3000	Pb	Zen	P	DR	Own	U	4	Own	Sp	48.87	4	D	170	5789	32x6	32x6D
Dodge Bros. F62	3	2695	Own	6	3⅝x5	31.5	96@3000	Pb	Zen	P	DR	Own	U	4	Own	Sp	48.87	4	D	195	5901	32x6	32x6D
Durant	*¾	495	Con	4	3⅜x4½	18.2	———	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4 75
Essex Commercial	¾	445	Own	6	2¾x4½	18.2	———	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5.56
Federal D	1½	830	Con W 10	4	3⅞x4¼	24.0	48@2500	Pb	Zen	P	DR	W-G T9	U	4	Cla	Sp	40.8	4	Tr	131	3185	6.00x20	32x6
Federal E6	1½	1090	Con 17 E	6	3⅜x4	27.3	60@2600	Pb	Zen	Vac	DR	W-G T9	U	4	Cla	Sp	34.6	4	Tr	132	3260	6.00x20	32x6
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	64@2500	Pb	Zen	P	DR	Own	U	4	Tim	Sp	24.3	4	Tr	132	3765	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	64@2500	Pb	Zen	Vac	DR	Own	C	4	Cla	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	64@2500	Pb	Zen	Vac	DR	Own	C	4	Tim	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal A6TW	2½	2360	Con 16 C	6	3⅜x4⅝	27.3	64@2500	Pb	Zen	Vac	DR	Own	C	4	Tim	Wo	42.0	4	Tr	151	4950	32x6	32x6D
Federal T10B	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	75@2200	Pb	Zen	P	DR	Own	C	4	Tim	Sp	36.3	4	Tr	165	6550	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	75@2200	Pb	Zen	P	DR	Own	C	4	Tim	Wo	44.0	4	Tr	165	6850	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	85@2200	Pb	Str	P	DR	Br-L 55	C	7	Tim	Wo	64.6	4	D	165	7220	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4½x4¾	40.8	90@2200	Pb	Zen	P	DR	Br-L 55	C	7	Tim	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4½x4¾	40.8	90@2200	Pb	Zen	P	DR	Br-L 55	C	7	Tim	Wo	73.6	4	D	192	8850	36x8	36x8D
*Federal U6SW	6	6000	Con 20 R	6	4½x4¾	40.8	90@2200	Pb	Zen	P	DR	Br-L 55	C	7	Tim	Wo	71.3	6	Tr	201	9850	34x7	34x7D
*Federal U6SWAB	6	6500	Con 20 R	6	4½x4¾	40.8	90@2200	Pb	Zen	P	DR	Br-L 55	C	7	Tim	Wo	71.3	6	Tr	201	9900	34x7	34x7D
Federal X8	7½	5085	Con B 7	4	5 x8	40.0	61@1350	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	100@2200	Pb	Zen	P	DR	Br-L 60	C	7	Tim	Wo	110.9	R	D	162	10000	40x8	40x8D
*Federal 4C6SW	8	7500	Con 21 R	6	4⅜x4¾	45.9	100@2200	Pb	Zen	P	DR	Br-L 55	C	7	Tim	Wo	80.8	6	Tr	231	11500	36x8	36x8D
Ford AA	1½	510	Own	4	3¾x4¼	24.0	40@2200	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	131½	2723	6.00x20	32x6
Ford AA	1½	535	Own	4	3¾x4¼	24.0	40@2200	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	157	2811	6.00x20	6.00x20
F W D—H	1½	3300	Wis S U	4	4 x5	25.6	———	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F W D—H6	2	3425	Wak	6	3¾x4½	29.4	72@2500	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F W D—BTL	2	3900	Wak	6	3¾x4¾	33.7	72@2500	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	137½	6000	36x8	36x8
F W D—HH6	2½	4000	Wak	6	3¾x4¾	33.7	72@2500	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101.0	4	R	138	6400	36x8	36x8
F W D—B	3	4200	Own	4	4⅜x5½	36.1	56@1350	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S
F W D—BT	3-3½	4742	Wak	6	4⅛x5⅛	40.8	———	Pb	Zen	Vac	Eis	Own	C	5	Own	St	101.0	4	R	137¾	7700	40x7S	40x5SD
F W D—CU6	3½	5120	Wak	6	4⅛x5⅛	40.8	92@2300	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x8S
F W D—SSU	4	5220	Wak	6	4⅜x5⅛	45.9	102@2200	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7600	38x9	38x9
F W D—M5	5	7600	Wak	6	4⅜x5⅛	45.9	102@2200	P	Zen	P	Aut	Br-L	U	8	Wis	2R	193.1	4V	D	165	11000	12.75x20B	12.75x20B
*F W D—X6	6	6500	Wak	6	4⅜x5⅛	45.9	102@2200	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	*	4	170	9500	36x8	36x8
F W D—M7	7½	8700	Wak	6	5 x5¾	60	127@2000	P	Zen	P	Aut	Br-L	C	8	Wis	2R	193.1	4V	D	165	13000	40x10P	40x10DF
Garford Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	P30x5	P30x5
Garford Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	P30x5	DP30x5
Garford Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	P34x5	DP34x5
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Garford Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	73@2000	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	D36x6
Garford Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	73@2000	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D38x7
Garford Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	85@2400	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	85@2000	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Garford Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	85@2400	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Gen. Mot. T11-1001	3800	625	Pontiac	6	3⅛x3⅞	26.3	58@3000	Pb	Mar	P	DR	Own	U	3	Pont	Sp	14.7	4	4	109⅝	1980	5.00x19B

JERSEY JOBBER BUILDS BUSINESS WITH CLINIC IDEA

Norwood Tire Co. Adheres Strictly to Standard Lines

PROMPT delivery of orders, staging of successful clinics and adhering closely to the policy of carrying standard brands of nationally advertised merchandise, are high lights in the success of the Norwood Tire Company, Inc., of Long Branch, N. J.

The concern, doing a general wholesale business, attributes its success to its merchandising efforts.

When the firm decided recently to open a branch in Atlantic City, N. J., it did not stop with merely leasing or renting a store with sufficient room for mechanical shop at small cost, but instead decided to harmonize its new building with Atlantic City's famous boardwalk, its million-dollar buildings and artistic fronts. As a result the jobber built one of the most attractive automotive buildings in the state. The automotive idea, in the form of wheels, was carried out in the decorations just above the show windows. Artificial limestone was used for economy, but it produced the desired effect.

The branch, which does a business of approximately $200,000 a year, has a manager and a staff of nine employees in the store and field.

Another branch, which is doing a good business this year despite the depression, is located in Perth Amboy, N. J.

The annual clinic and open house in Long Branch are big events in the lives of the service men and garage owners in south Jersey. At the 1930 affair slightly more than 900 invitations brought 900 dealers, from Somerville to Barnegat.

The proceedings this year began on a Tuesday afternoon and continued during the evening and again the following afternoon and evening. A buffet lunch was served by the officials of the Norwood Tire Company's main office.

Inspection tours over the large plant of the Long Branch Company were made by the visitors and demonstrations were given by experts from the various manufacturers of the equipment carried by the company. A welder from the Oxweld Company gave instructions in welding. A chemist from the White & Bagley Company, oil refinery, gave demonstrations in testing oils.

Thirty-three executives from manufacturing plants throughout the country were present and gave demonstrations of their products.

YOUNG RADIATOR CO. PLANS EXHIBIT AT ST. LOUIS SHOW

Racine, Wis., Dec. 24.—The Young Radiator Company here, manufacturer of radiators for gasoline and Diesel engines, for trucks, for power units and for industrial machines, oil coolers, also heating units for factories and buildings, will exhibit at the 1931 Convention and Road Show to be held at St. Louis, Mo., January 12 to 16.

NEW S. O. HEADQUARTERS

Columbia, S. C., Dec. 24.—Standard Oil Company's new $350,000 state headquarters plant has been opened here. The plant consists of an office building, a garage, where all repair work on the company's trucks in this state will be done, a storage building and a service station. It was opened Monday, November 3, after a transfer from the headquarters then in Charleston, which was effected over the week end. One hundred and thirty employees of the company were transferred from Charleston to Columbia.

MERGER IS REPORTED

Trenton, N. J., Dec. 24.—The New Jersey Wire Cloth Company of this city which has been operated as a subsidiary of John A. Roebling's Sons Company has been merged with the parent company. Sales of products of the New Jersey Wire Cloth Company will be handled through the Roebling branches.

Major Specifications and Mechanical Details of 1930 Commercial Cars

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	No. of Cyls.	Bore and Stroke	Tax H. P.	Max. Brake H. P. at Specified R. P. M.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
*Gramm C	2	1795	Lyc ASA	6	3⅜x4½	31.54	82@2600	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	D	160	4820	7.00x20	7.00x20D
Gramm CX	2	1095	Con W-11	4	4½x4¼	—	55@2600	Pb	Til	P	Aut	W-G	U	4	Tim	Sp	37	4	D	131	3300	6.50x20	6.50x20D
Gramm CX	2	1295	Con 16 C	6	3⅜x4⅛	—	70@3000	Pb	Til	P	Aut	W-G	U	4	Tim	Sp	37	4	D	131	3300	6.50x20	6.50x20D
*Gramm D	2½	1995	Lyc ASD	6	3¾x4½	33.7	90@2200	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	D	160	5100	7.50x20	7.50x20D
*Gramm E	3	2595	Lyc TS	6	3⅞x5	38	90@2200	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	35	4	D	160	5500	8.25x20	8.25x20D
*Gramm EY	3	3595	Con 20 R	6	4⅛x4¾	40.80	90@2200	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	30	4	D	190	6750	7.50x20	7.50x20D
*Gramm T-38	3	3595	Lyc TS	6	3⅞x5	36	90@2200	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3⅞x5	36	85@2200	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	100@2200	Pb	Zen	P	Aut	Cov	U	4	Wis	2R	28	4	D	210	7200	8.25x20	8.25x20D
Gramm GW	4	5175	Con 21 R	6	4⅜x4¾	45.9	100@2200	Pb	Zen	P	Aut	Cov	U	4	Wis	2R	—	4W	D	157	8900	9.00x20	9.00x20D
*Gramm O-60	5	4745	Lyc TS	6	3⅞x5	36	———	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x8S	36x14S
*Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	127@2300	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
Indiana 60	1	995	Con	6	3⅜x4	27.3	61@3000	Pb	Str	P	Aut	W-G	U	3	Col	Sp	—	4	Tr	132	3200	30x5	30x5
Indiana 64	1	1195	Con	6	3⅜x4⅝	27.3	65@2700	Pb	Str	Vac	Aut	Br-L	U	3	Col	Sp	—	4	Tr	137	3400	30x5	30x5
Indiana 74	1½	1290	Con	6	3⅜x4⅜	27.3	65@2700	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	137	3450	32x6	32x6
Indiana 11	1½	1425	Her	4	4 x5	25.6	46@2000	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	—	R	R	129½	3500	30x5	30x5
Indiana 89	1½	1525	Con	6	3⅜x4⅝	27.3	65@2700	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	—	4	Tr	149	3650	32x6	32x6
Indiana 111	1½	1630	Her	4	4 x5	25.6	46@2000	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	—	R	R	129½	3600	30x5	32x6
Indiana 111 XW	2	1850	Her	4	4 x5	25.6	46@2000	Pb	Str	Vac	Eis	Br-L	U	4	Wis	2R	—	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con	6	4 x4½	38.4	73@2400	Pb	Str	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Indiana 140	2-2½	2495	Con	6	4 x4⅛	38.4	73@2400	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	158	5500	32x6	32x6D
Indiana 141	2½	2935	Con	6	4 x4⅛	38.4	73@2400	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6200	32x6	32x6D
Indiana 115 A	2½	2740	Her	6	4¼x5	28.9	56@2000	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	—	R	Tr	132	4970	32x6	34x7D
Indiana 170	2½	3160	Con	6	4⅛x4¾	40.8	88@2400	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Indiana 175	3	3660	Con	6	4⅜x4¾	45.9	100@2400	Pb	Str	P	Aut	—	U	5	Wis	2R	—	4HV	D	170	7200	34x7	34x7D
Indiana 127 AW	3	3775	Her	4	4¼x5¾	28.90	54@1600	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	—	RV	D	150¼	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis	6	4 x5	38.40	72@2000	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	—	RV	D	156¼	7200	34x7	34x7D
Indiana 195	3-3½	3820	Con	6	4⅛x4¾	40.8	89@2400	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Indiana 190	3	4185	Con	6	4⅛x4¾	40.8	89@2400	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Indiana 220	3½-4	4560	Con	6	4⅜x4¾	45.9	100@2400	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Indiana 250	5	5950	Con	6	4⅜x4¾	45.9	100@2400	Pw	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HMV	D	182	10000	40x8	40x8D
Indiana 290	7½	7250	Con	6	4¾x5¾	54.1	116@1800	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7P	40x14S
*Indiana 640	10	9700	Con	6	4¾x5¾	54.1	116@1800	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	212	14000	38x7P	36x10S
International AW1	¾	720	Wak X A	4	3½x4½	19.6	30@2700	Pb	Zen	Vac	DR	Mec	U	3	Own	Sp	17.4	4	2	136	2620	5.25x20	5.25x20
Internat'n'l Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	30@2700	Pb	Zen	Vac	DR	Mec	U	3	Eat	Sp	60.3	4	2	124	2200	5.25x30	5.25x30
Intern'l 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	30@2700	Pb	Zen	Vac	DR	Mec	U	3	Eat	Sp	52.6	4	2	124	2430	30x5	30x5
International S24	1¼	1160	Lyc C T	4	3⅜x5	22.5	43@2350	Pw	Zen	Vac	DR	Own	U	3	Eat	Sp	21.3	4	2	130	3200	30x5	30x5
International S26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	61@2800	Pb	Zen	Vac	DR	Own	U	3	Eat	Sp	21.3	4	2	130	3250	30x5	30x5
International AW2	1½	820	Wak X A	4	3½x4½	19.6	30@2700	Pb	Zen	Vac	DR	Mec	U	3	Own	Sp	60.3	4	2	136	2980	5.50x20	6.00x20
International SF34	1½	1450	Lyc C T	4	3¾x5	22.5	43@2350	Pw	Zen	Vac	DR	Own	U	3	Eat	Sp	22.6	4	2	140	3[illegible]	30x5	32x6
International AL3	1½	1450	Lyc 5LH	6	3¼x4½	25.3	61@2800	Pb	Zen	Vac	DR	W-G	U	4	Own	Sp	42.9	4	2	138	4[illegible]	6.00x20	6.00x20D
International SF36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	61@2800	Pb	Zen	Vac	DR	Own	U	3	Eat	Sp	22.6	4	2	140	3570	30x5	32x6
International SD44	2	1590	Lyc C T	4	3⅜x5	22.5	43@2350	Pw	Zen	Vac	AB	Own	U	4	Eat	Sp	40.6	4	2	117	3700	30x5	32x6
International SD46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	61@2800	Pb	Zen	Vac	AB	Own	U	4	Eat	Sp	40.6	4	2	117	3750	30x5	32x6
International SF46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	61@2800	Pb	Zen	Vac	DR	Own	U	4	Eat	Sp	40.6	4	2	140	4000	32x6	32x6D
International A4	2	1985	Own F B B	6	3⅝x4½	31.5	65@2800	Pb	Zen	Vac	DR	Own	U	5	Own	Sp	47.8	4	2	145	5070	32x6	32x6D
International HS54	2½	3850	Hall-S 151	4	4¼x5½	28.9	54@1800	Pb	Zen	Vac	RB	Own	U	5	Eat	2R	60.5	4	4	148	8000	36x5S	36x8S
International HS54C	2½	3850	Hall-S 151	4	4¼x5½	28.9	54@1800	Pb	Zen	Vac	RB	Own	U	5	Own	Ch	63.8	4	4	148	8665	36x5S	36x10S
International W1	2½	3850	Hall-S 151	4	4¼x5½	28.9	54@1800	Pb	Zen	Vac	RB	Own	U	5	Own	2R	60.5	4	2	148	8300	36x5S	36x8S
International A5	3	2550	Own F B B	6	3⅜x4½	31.5	65@2800	Pb	Zen	Vac	DR	Own	U	5	Own	Sp	52.6	4	2	156	5600	34x7	34x7D
International A6	3	2675	Own B B	6	3⅜x4½	31.5	65@2800	Pb	Zen	Vac	DR	Own	U	5	Own	Sp	62.5	4	2	156	5750	34x7	34x7D
International HS74	3½	4850	Hall-S 152	4	4¾x5½	36.1	60@1800	Pb	Zen	Vac	RB	Own	U	5	Eat	2R	70.5	4	4	160	10700	36x5S	40x12S
International HS74C	3½	4850	Hall-S 152	4	4¾x5½	36.1	60@1800	Pb	Zen	Vac	RB	Own	U	5	Own	Ch	79.1	4	4	160	11000	36x6S	40x12S
International W3	3½	4850	Hall-S 152	4	4¾x5½	36.1	60@1800	Pb	Zen	Vac	RB	Own	U	5	Own	2R	70.5	4	2	160	10125	36x6S	40x12S
Internat'n'l HS104C	5	5500	Hall-S 152	4	4¾x5½	36.1	60@1800	Pb	Zen	Vac	RB	Own	U	5	Own	Ch	90.5	4	4	160	11093	36x6S	40x14S
La France-Rep. A1	6000	795	Lyc	6	2⅞x4¾	19.8	59@3000	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Rep. C1	7500	1295	Lyc	6	3¼x4½	25.4	61@2750	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Rep. D1	9000	1595	Lyc	6	3¼x4½	25.4	61@2750	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Rep. F2	13000	2395	Lyc	6	3⅜x5	31.5	83@2800	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5400	32x6	32x6D
La France-Rep. H2	15000	2985	Lyc	6	3⅞x5	36.0	———	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	44.5	4	D	174	5850	34x7	34x7D
La France-Rep. 35-2	24000	5600	Wak	6	4½x5¾	48.6	———	Pb	Zen	Vac	Aut	Ful	U	4	Wis	2R	45.4	4	D	174	8200	38x9	38x9D
La France-Rep. M2	20000	4000	Wak	6	4⅜x5½	48.0	———	Pb	Zen	Vac	Aut	Ful	U	5	Wis	2R	62.3	4	D	174	6900	36x8	36x8D
Mack BL	1	2500	Own	6	3¼x5	25.39	63@2800	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	———	B6.00x20	DB6.00x20
††Mack BG	1½	3000	Own	6	3⅜x5	31.57	75@2600	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	156	———	32x6	D32x6
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	60@2200	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	———	36x8S	36x8S
††Mack AB	2½-3	3500	Own	4	4¼x5	28.9	60@2200	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	———	36x8S	36x8S
Mack AB	2½-3	4750	Own	6	3⅜x5	31.57	75@2600	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	———	34x7	D34x7
††Mack AB	2½-3	4300	Own	6	3⅜x5	31.57	75@2600	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	———	34x7	D34x7
††Mack B	3-4	5250	Own	6	4 x5½	38.4	100@2300	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	———	36x8	D36x8
††Mack BC	3½-5	5500	Own	6	4 x5½	38.4	100@2300	Pb	Str	Vac	NE	Own	U	4	Own	Ch	Opt	4	D	2-Opt	———	36x8	36x8D
††Mack BJ	3½-5	6150	Own	6	4½x5½	48.6	126@2200	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	———	36x8	36x8D
††Mack AK	3½-5	5150	Own	4	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	J	3-Opt	———	36x5S	36x5DS
††Mack AK	3½-5	5250	Own	4	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	———	36x5S	36x5DS
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	———	36x5S	40x10S
††Mack AC	5½-7	5500	Own	4	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	———	36x6S	40x12S
††Mack AC	7½	6000	Own	4	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	———	36x7S	40x14S
††Mack AP 6-wheel	7½	9500	Own	6	5 x6	60.0	150@2000	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	191	———	36x7S	40x8DS
††Mack AC 6-wheel	10	7500	Own	6	5 x6	40.0	77@1800	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	———	36x7S	40x12S
††Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	150@2000	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	———	36x7	40x12S
Paige	¾	860	Own	6	3¼x4½	25.38	76@3400	Pb	DL	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series 15 AA	¾	1370	Con 17 E	6	3⅜x4	27.3	52@2200	Pb	Str	Vac	Aut	W-G	U	4	Own	2R	38.4	4	D	131	3750	30x5P	30x5P
Relay Series 15 AB	1	1400	Con 17 E	6	3⅜x4	27.3	52@2200	Pb	Str	Vac	Aut	W-G	U	4	Own	2R	38.4	4	D	131	3800	P30x5	P30x5
Relay Series S 11	1	1700	Bud 11 S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	25.5	4	D	142	4050	30x5P	30x5P
Relay Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	30.0	4	D	162	4500	30x5P	30x5DP
Relay Series 40	1½	2990	Bud D S 6	6	3⅜x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	34.5	4	D	168	5300	34x4P	34x5DP
Relay Series 40	2	3240	Bud D S 6	6	3⅜x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	34.5	4	D	168	5500	36x6	D36x6
Relay Series 50	2	3860	Bud D W 6	6	3¾x5	33.7	73@2200	Pb	Zen	Vac	Aut	Br-L	U	5	Own	2R	58.5	4	D	161	6800	36x6	D36x6
Relay Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	52@2200	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	30.0	4	D	162	4700	32x6P	32x6DP
Relay Series 50	2½	3275	Bud D S 6	6	3⅜x5	31.5	56@2000	Pb	Zen	Vac	Aut	Br-L	U	4	Own	2R	34.5	4	D	168	5700	36x6	D36x6
Relay Series 50	2½	4000	Bud D W 6	6	3¾x5	33.7	73@2200	Pb	Zen	Vac	Aut	Br-L	U	5	Own	2R	58.5	4	D	161	7000	36x6	D38x7
Relay Series 60	2½	4555	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Ful	C	5	Own	2R	58.5	4	D	175	7350	36x6	D36x6
Relay Series 50	3	4130	Bud D W 6	6	3¾x5	33.7	73@2200	Pb	Zen	Vac	Aut	Br-L	U	5	Own	2R	58.5	4	D	161	7200	36x6	D40x8
Relay Series 60	3	4595	Bud B A 6	6	4⅜x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Ful	C	5	Own	2R	58.5	4	D	175	7500	36x6	D38x7
Relay Series 60	3	4570	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Ful	U	5	Own	2R	58.5	4	D	175	7500	36x6P	38x7DP
Relay Series 80	3	5170	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Cov	C	8	Own	2R	84.18	4	D	175	8400	36x6	S40x10
Relay Series 60	3½	4745	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Ful	C	5	Own	2R	58.5	4	D	175	7800	38x7	D40x8
Relay Series 80	3½	5330	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Cov	C	8	Own	2R	84.18	4	D	175	8600	36x6	S40x12
Relay Series 80	4	5380	Bud B A 6	6	4¼x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Cov	C	8	Own	2R	84.18	4	D	175	8800	38x7	S40x14
Relay Series 50 SW	5	5505	Bud D W 6	6	3¾x5	33.7	73@2200	Pb	Zen	Vac	Aut	Br-L	U	5	Own	2R	54.7	4	D	152	8600	36x6P	36x6DP
Relay Series 100	5	6615	Con 21 R	6	4⅜x4¾	45.9	112@2400	Pb	Str	Vac	Aut	Ful	C	5	Own	2R	58.5	4	D	230	10000	9.00x24	D9.00x24
Relay Series 60 SW	7	6545	Bud B A 6	6	4½x5½	40.8	83@2000	Pb	Zen	Vac	Aut	Ful	U	5	Own	2R	63.6	4	D	175	12000	38x7P	40x8DP
Reo 15 Junior	½	785	Con 19 E	6	3⅜x4	27.3	60@2800	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D F 129	1	1095	Own C A	6	3⅜x5	27.3	80@3200	Pb	Sch	Vac	DR	Own	C	3	Own	Sp	17.1	4	Tr	129	3050	6.00x20	32x6
Reo D F	1	1095	Own C A	6	3⅜x5	27.3	80@3200	Pb	Sch	Vac	DR	Own	C	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1½	1295	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	137	3525	6.00x20	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	152	3700	6.00x20	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	34.32	4	Tr	156	3750	6.00x20	32x6
Reo F H	2	1595	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D
Reo G A	3	2035	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	C	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	C	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	2085	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	C	4	Own	Sp	78.1	4	Tr	144	4570	32x6	32x6D
Reo G C S	3	2375	Own	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	210	5320	32x6	32x6D
Reo G B	3	2290	Own C F	6	3⅜x5	27.3	67@2800	Pb	Sch	Vac	DR	Own	C	4	Own	Sp	40.52	4	Tr	179	———	32x6.00	32x6D
Rugby T	½	655	Con	6	3¼x4	25.4	58@3100	Pb	Str	P	Aut	Own	U	3	Own	Sp	15.6	4	—	—	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3¼x4	25.4	58@3100	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	5.50x20	32x6
Rugby 615	1½	930	Con	6	3¼x4	25.4	58@3100	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	3000	5.50x20	30x5D
Selden 7 C	1¼	1195	Con	6	3⅜x4	27.3	———	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	124	3100	30x5	30x5
Selden 17 C	1½	1500	Con	6	3⅜x4	27.3	61@3000	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 317 C	1½	1610	Con	6	3⅜x4⅝	27.34	65@2760	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3⅜x4⅝	27.34	65@2760	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4½	38.4	72@2400	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4½	38.4	85@2400	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47

MERCHANDISING
ACCESSORIES
EQUIPMENT

WHOLESALE

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

Lincoln Jobbers Urging Trade to Push Collections

LINCOLN, Neb., Dec. 24.—**The movement of automobile accessories suitable for Christmas gifts has been about up to the same period a year ago, but the jobbing business as a whole has been dull in December in this territory. A hopeful sign this month, however, has been a loosening up of money, which has helped the credit phase of the business considerably. Credit and collection prospects have been brighter this month than for an entire year, and credit managers of jobbing firms have been "making hay" by urging dealers to push their collections in order that the latter may speed up their payments to the jobbers.**

Lincoln jobbers are convinced that business will improve in 1931, although they look for this improvement to come gradually. December sales are usually slow and lacking in volume, so that the jobbers see nothing to be alarmed about in connection with the present dull market. Radio sales have slumped way beyond expectations, and there is a tendency evident here for jobbers to relegate the radio to the background, or to entirely drop it, in their sales campaigns.

The movement of Mansfield tires continued well ahead of last year for the Henkle & Joyce Hardware Company, covering a territory including all of Nebraska, eastern Colorado, northern Kansas, southern South Dakota and Wyoming.

F. D. Wilson Sales Company, specializing in replacement parts, has experienced a dull December, but this condition is normal, Mr. Wilson says. Business will pick up early in 1931, he declares.

H. E. Sidles Company reports a slight improvement in collections, but slow sales on the majority of the equipment and replacement lines. Collections are best in the west part of the state where the Sidles Company maintains a store at Scottsbluff. The payment of several millions to sugar beet growers in the North Platte River Valley by the sugar companies early in December, enlivened credit conditions there considerably. L. J. Messer Supply Company also reports better collections for its store at McCook in the southwestern part of Nebraska, where cattle are beginning to move to the market.

Salesmen of the Sidles Company are pushing several lines at present with good success. For example, Imperial Primers are being talked up largely to dealers.

ACCESSORIES EXHIBIT AT EVANSVILLE SHOW

Evansville, Ind., Dec. 24.—Seven booth displays of automobile tires, batteries, accessories and service tools will supplement car exhibits by fourteen dealers at the 1931 annual automobile show of the Evansville Automobile Dealers' Association, to be staged at the Coliseum, January 13 to 17, William A. White, manager, announced.

The Orr Iron Company's automotive supplies department will feature booth demonstrations of tires, batteries and service tools; National Battery Company, Willard batteries; and the Overhead Door Corporation, folding doors for garages.

GARAGE OWNERS GROUP IN YOUNGSTOWN ELECTS

Youngstown, O., Dec. 24.—Frank Ebert was elected head of the Association of Garage Owners of Mahoning Valley recently. Other officers elected were: Joseph Shore, vice-president; Howard J. Wolf, recording secretary; R. W. Sterling financial secretary, and William Stickle, treasurer.

NEW SUPPLY FIRM

West New York, N. J., Dec. 24.—The Beinhardt Auto Supply Company of 625 Bergenline Ave., this place, has been formed by Otto Cooper, Dorothy Sturm and Sidney Cooper.

Editor's Column

WHILE the well organized chain merchandising systems have not reached their peak of expansion, the chains are nevertheless confronted with several vital internal and external problems which may have a marked effect on their future success, according to one chain store merchandising authority.

"A major problem facing the national chain is that of personnel," he said. "The chain is aware of its weakness in this branch of its organization and is constantly striving to improve it. Chain merchandising requires a much more intelligent personnel than the average chain store executive is willing to admit, the average chain being satisfied to utilize a type of employee showing the lowest possible labor cost.

"Therefore, the main reason the chains' personnel problem is yet unsolved, is the unwillingness to substitute a higher type of employee in many departments. I am not referring, of course, to the executive management personnel. Here the chain is willing to pay almost any price, but it is in the unit departments, where the rank and file of ordinary labor is employed, that the chain is exceptionally weak.

"The chain store executive argues that he meets the price of labor in every market. Quite true, he does, but he does not supply the type of employee that his system of merchandising demands. It is for this reason alone that any intelligent retailer can open a store alongside a chain store and outstrip the chain, even with its vaunted advantages in buying and executive management. Every city in the country has thousands of independent retailers that not only do not fear chain competition, but absolutely ignore it, simply because the independent merchant, in such cases, is a higher type of man and can utilize his knowledge and his individuality to gain the confidence of his consumer.

"Much remains to be done by the chains in improving their relations with manufacturers. Many chains so far have not developed the right spirit of co-operation with manufacturers. Because of the volume involved, and the fear that the business may go to a competitor, the manufacturer takes the business offered by the chains at their terms. There is a constant hammering down of price that does not make for a friendly attitude on the part of the producer.

"The latter may have spent considerable time and money in building up a product, but in many instances the chain does not protect him. Where it finds price hammering tactics succeed in getting a lower price from another producer, it has frequently been the case that all the benefits obtained from the first manufacturer are forgotten. Of course, there are outstanding exceptions to this among many of the leading chains, which have maintained excellent relations with sources of supply, but generally speaking the average chain has always considered price as its 'best friend,' a tendency which is not in as good repute with big business as it used to be.

"Anti-chain propaganda, while it has not retarded chain store expansion, has nevertheless placed the chain on the defensive. At one time there were as many as 260 towns and cities, with a total population of over 9,000,000 people, arrayed against chain stores. In these cities there were over 300 anti-chain store organizations combating the chains.

"Here again the average chain was responsible for this condition, because for a long time it refused to become a part of the community where it located, and did not show enough interest to take the initiative in community activities or support community enterprises. It was only after this anti-chain propaganda had threatened to assume serious proportions that the more aggressive chain executives decided that as a matter of policy it would be to their interest to support community activities, and those chains that have taken the initiative have found it to be a very good investment.

"The sooner, then, that all chains become a part of the community, not only will it help to overcome the antagonism, but such action may be a decidedly important factor in helping to defeat the anti-chain legislation now being agitated. There are something like eighty bills pending in various state Legislatures, with the sole object of penalizing chain stores and halting their future expansion program. It is questionable, if anti-chain legislation is passed, that the courts will uphold it as constitutional.

"If, however, the anti-chain propagandists, successfully evolve a bill that will pass the courts and give the state the right to tax the chain, either on its volume business or on its net profits, there is no question that it will seriously curtail future chain development and may have a serious effect on the earning power of some chains."

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Major Specifications and Mechanical Details of 1930 Commercial Cars

(Continued From Page 8)

Make and Model	Capacity—Tons or Lbs.	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Max. Brake H. P. Specified R. P. M.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Studebaker S-20	1½	695	Own	6	3¼x4½	25.4	68@3200	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	130	2985	6.00x20	32x6
Studebaker S-30	1½	775	Own	6	3¼x4½	25.4	———	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	160	3140	6.00x20	32x6
Studebaker S-50	2	895	Own	6	3¼x4½	25.4	68@3200	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	148	3810	6.50x20	6.50x20D
Studebaker S-60	2	945	Own	6	3¼x4½	25.4	———	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	160	3850	6.50x20	6.50x20D
Studebaker GN-N	4000	1245	Own	6	3⅝x4½	27.3	———	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	146	3265	30x5	32x6
Studebaker 77	12500	2895	Own	8	3½x4½	39.2	115@3200	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	158	5030	7.00x20	7.00x20D
Studebaker 88	12500	3295	Own	8	3½x4½	39.2	115@3200	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5200	7.50x20	7.50x20D
Studebaker 99	14000	3795	Own	8	3½x4⅜	39.2	115@3200	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5680	7.50x20	7.50x20D
Whippet 96 A	½	360	Own 96 A	4	3½x4¾	15.6	40@3200	Pw	Til	Vac	Aut	Own*	U	3	Own	Sp	15.84	4	B	103¼	1665	4.75x19	4.75x19
White 15 B	———	1545	Own GKA	4	3¾x5½	22.5	31@1600	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3402	30x5	30x5
White 160	———	1700	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	19.5	4	Tr	138	4025	30x5	30x5
White 161	———	1850	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	19.5	4	Tr	138	4290	34x7	34x7
White 60	———	1850	Own 2 A	6	3½x4½	29.4	54@2100	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.8	4	D	138	3739	30x5	30x5
White 162	———	1900	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	19.5	4	Tr	138	4260	30x5	30x5D
White 210	———	2300	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	Tr	148	4875	30x5	30x5D
White 211	———	2425	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	Tr	148	5110	32x6	32x6D
White 212	———	2700	Own 6 RCB	4	4 x5¾	25.6	45@1800	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	Tr	148	5230	34x7	34x7D
White 57	———	2725	Own GRC	4	4 x5¾	25.6	45@1600	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3935	32x6	32x6
White 20 A	———	2125	Own GKA	4	3¾x5½	22.5	31@1600	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4572	34x5	34x5D
White 61	———	2450	Own 4 A	6	3¾x4½	33.75	61@2100	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4780	30x5	30x5D
White 56	———	3125	Own GRC	4	4 x5¾	25.6	45@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	Sp	26.2	R	D	165	5276	36x4S	36x7S
White 51 A	———	3750	Own GRB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	Sp	35.6	R	D	170	6438	36x5S	36x9S
White 51 AT	———	3875	Own 6 RB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	Sp	46.6	R	D	134	6227	36x5S	36x8S
White 58	———	4400	Own GRB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	IG	49.7	D	R	170	6438	36x5S	36x9S
White 65 K	———	4600	Own 3 A	6	4 x5¼	38.4	72@1800	Pw	Zen	—	DR	Own	U	4	Own	Sp	33.9	4	D	180	7408	8.25x20B	8.25x20DB
White 55	———	4650	Own GRB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	IG	76.5	D	R	174	8737	36x5S	40x5SD
White 52 T	———	4700	Own GRB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	4	Own	IG	66.1	D	R	129½	8461	36x5S	40x5SD
White 52	———	5100	Own GRB	4	4¼x5¾	28.9	54@1600	Pw	Zen	Vac	Eis	Own	U	5	Own	IG	58.4	D	R	174	9409	36x6S	40x12S
White 59 A	———	6000	Own 3 A	6	4 x5¼	38.4	72@1800	Pw	Zen	P	DR	Own	U	4	Own	Sp	66.5	D	R	155	9775	40x8	40x14S
White 63	———	5000	Own 3 A	6	4 x5¼	38.4	72@1800	Pw	Zen	P	DR	Own	U	4	Own	Sp	41.4	4	D	168	8350	34x7P	34x7DF
White 64	———	6300	Own 1 A	6	4⅜x5¾	45.94	96@1800	Pw	Zen	P	L-N	Own	U	4	Own	2R	46.9	4	D	180	9154	36x8P	36x8DF
White 63 SW 200	———	6010	Own 3 A	6	4 x5¼	45.9	72@1800	Pw	Zen	P	DR	Own	U	4	Tim	Wo	44.2	4	—	193	10000	8.25x20B	8.25x20DB
White 64 SW 200	———	7082	Own 1 A B	6	4⅜x5¾	45.9	96@1800	Pw	Zen	P	L-N	Own	U	4	Tim	Wo	45.8	4	—	198	11200	8.25x20B	8.25x20DB
White 64 SW 300	———	7430	Own 1 A B	6	4⅜x5¾	45.9	96@1800	Pw	Zen	P	L-N	Own	U	4	Tim	Wo	56.7	4	—	198	12400	9.00x20B	9.00x20DB
White 59 ASW 400	———	8950	Own 1 A B	6	4⅜x5¾	45.9	96@1800	Pw	Zen	P	L-N	Own	U	4	Tim	Wo	67.1	4	—	204	13200	40x8S	40x8D
Willys Six 98 B	½	525	Own 98 B	6	3¼x3⅞	25.35	65@3400	Pw	Til	Vac	Aut	Own	U	3	Own	Sp	14.28	4	B	110	1904	5.50x19	5.00x19
Willys Six C-101	1½	695	Own C 101	6	3¼x3⅞	25.35	65@3400	Pw	Til	Vac	Aut	Own	U	4	Cla	Sp	42.33	4	B	131	2740	5.50x20	30x5
Willys-Knight T-103	1½	825	Own KGT	6	2⅞x4⅜	20.7	55@3000	Pw	Til	Vac	Aut	Cov	U	4	Cla	Sp	42.33	4	B	131	2848	5.50x20	30x5

GENERAL NOTATIONS

***†REFERENCE MARKS** apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin; Hall, American Car & Foundry.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all main, connecting rod and camshaft bearings, including wrist pins; CS, circulating splash; Sp, splash.

CARBURETOR—Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Vac, Vacuum tank; P, Fuel pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; DR, Delco-Remy; Mag, Magneto.

TRANSMISSION—Br, L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cotta Cotta Gear Company; Cla, Clark Equipment Company.

LOCATION—C, center, amid; U, in unit with engine; J, on jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—IG, Internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; R, Relay drive.

BRAKES—J, Jackshaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; V, Vacuum booster; W, Westinghouse air brake; B, Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid; P, Pneumatic.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain model also available as Dump Truck, 160-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUTOCAR

*Engines in these models are located under the driver's seat.

BROCKWAY

*Six wheelers.

DAY ELDER

Additional standard wheel bases are available on different models as follows:—

60.....	156	200.....	165, 180, 204
85.....	156, 168	240.....	214
110.....	168, 186	285.....	216
130.....	165, 180, 204	345.....	216
160.....	165, 180, 204	402.....	216

DIAMOND T.

Myers Magazine oiling system for chassis optional equipment.

DURANT

*Price includes panel body.

F. W. D.

The BTL and BT models are special line construction trucks in which complete provision for mounting AT and T earth boring machine, winch, body and other line construction accessories is included in the standard chassis.

*Indicates six-wheel model.

Special power take-off transmission, which provides 3 power take-offs which may be operated in any transmission speed, optional on all models.

*Foot brake on X6 is a Bendix type, operating on all six wheels.

FEDERAL

*Six wheelers.

GRAMM

Series	Straight Rating	Add. Wheel Base	Pay Load Range
6	10,000	157-174	1¾ tons
C	11,000	145-196	2 tons
D	13,000	145-196	2½ tons
E	15,000	145-196	3 tons

GENERAL MOTORS TRUCK

*Capacity indicated for each chassis is the recommended gross weight without exceeding rated capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below. Note: Models T-15 to T-60, inclusive, as well as Models TX and WX, are available as coach chassis for export only.

Model	Straight Rating	Additional Wh. bases, ins.			Addit'l Tire Types	Pay'l'd Range
T-11	3800	None			None	½
T-15	6500	141			9	¾-1¼
T-17	6500	141			6	¾-1¼
T-19	8500	141		151	20	1-2
T-25	9000	141		152	15	1-2
T-30	12500	152		164	13	1½-3
T-42	15000	152	164	181	10	2-4
T-44	16000	152	164	181	10	2-4½
T-60	22000	166¾	184½	200¼	16	2½-6
T-82	24000	167½	185¼	201	10	3-7
T-90	28000	201		220	5	5-7½

Optional rear axle ratios are available for all models. Double reduction axles available for Models T-60 and T-82.

INDIANA

*Six wheelers.

MACK

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYF—Hypoid drive, single reduction.

††Made also in tractor models.

REO

Model F A also available in 129-inch wheel base.

SELDEN

Additional standard wheel bases are available on different models as follows:—

Model 37C.....	162 and 181
39C.....	177 and 190½
47CB, 47CD....	151, 164 and 184
67C.....	151, 164, 184 and 198

STEWART

Models 30 and 30X can also be supplied in 110, 120 and 140-inch wheel base.

Models 40 and 40X can also be supplied in 110, 140 and 160-inch wheel base.

*Model 34X can be supplied in 135, 145, 160 and 176-inch wheel base.

Model 28X can be supplied in 130, 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 135, 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment models 18X, 19X, 33X, 31X and 27X can be supplied with Timken dual reduction rear axle.

STUDEBAKER

*Capacity model GN-N is 4,000 pounds for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs. and for Model 99 is 14,000 lbs.

‡Hand brake same as foot brake, standard. Hand brake on drive shaft, special equipment.

Production -- Engineering -- Factory -

Relative Knock-Ratings of 27 Hydrocarbons Determined

The relative knock-ratings of twenty-seven paraffin hydrocarbons in admixture with a commercial gasoline have been determined and included in a report to the American Chemical Society by Wheeler G. Lovell, John M. Campbell and T. A. Boyd, General Motors Research Laboratories, it is announced. According to the report, the results show possible variations in anti-knock quality far greater than that existing, at present, among commercial fuels. The importance of these results from a chemical standpoint, it is pointed out, lies in the fact that they show definite relationships between the molecular structure of the hydrocarbons and their tendency to knock.

"The twenty-seven hydrocarbons were obtained in a state of substantial purity as judged by ordinary organic standards," says the report. "The writers are indebted to Dr. Graham Edgar and the staff of the Ethyl Gasoline Corporation, Yonkers, N. Y., for a number of the pure hydrocarbons.

"Others have been synthesized or rigorously purified in the laboratories here according to the usual methods. Possibly the best indication of the purity of the compounds lies in the consistency of the relationships observed between the structures and knocking properties.

"This work was begun in 1926 as part of a program to gather data upon the relative detonation characteristics of pure substances suitable for fuel in an engine, which would be comprehensive enough to establish the relationship between structure and detonation characteristics. It is believed that the data presented here form a fairly consistent picture of this kind for the paraffin hydrocarbons boiling within the gasoline range."

Relative knocking tendencies of the various fuels, when mixed with commercial gasoline in a standard engine, were evaluated in terms of aniline, a knock suppressor.

A positive aniline equivalent means, the writers explain, that the fuel tested knocks less than the reference gasoline, and indicates the amount of aniline that must be added to the reference gasoline to make it equal to gasoline mixed with the fuel under test in anti-knock quality. A negative aniline equivalent means that the fuel tested knocks more than the reference gasoline, and indicates the amount of aniline that must be added to this fuel mixed with gasoline to bring it up to the standard of the reference gasoline.

"The aniline equivalent of benzine is plus 10," the report continues, "and that of the standard gasoline containing tetra-ethyl lead is also about plus 10. The aniline equivalent method of expressing knock rating provides a convenient and uniform basis for comparing compounds representing a wide range in tendency to knock.

"Although it is generally understood that there is considerable variation in the tendency of different commercial gasolines to knock, the magnitude of this variation is small compared with that which is possible."

Results of the investigation show definite relationships between the anti-knock properties of hydrocarbons and their chemical structure.

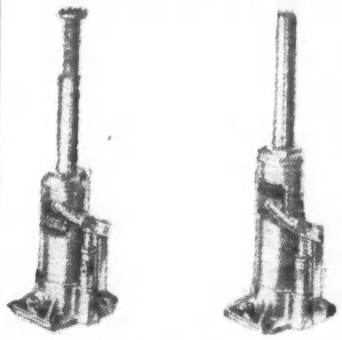
"For the normal paraffin hydrocarbons," the report adds, "there appears to be a regular increase in tendency to knock with increase in the length of the carbon chain in the molecule, or with molecular weight. It is possibly significant to note that, in all of the series considered the introduction of methyl groups in a basic chain has progressively increased the anti-knock properties by substantially a constant amount per methyl group.

"For a given molecular size, as what might be loosely termed the 'centralization of the molecule' is increased, the aniline equivalent increases, or there is less tendency to knock."

PRATT-WHITNEY AIRCRAFT HAS ANNUAL GET-TOGETHER

Hartford, Conn., Dec. 24.—Ninety officers, engineers and foremen of the Partt & Whitney Aircraft Company met in the company's restaurant here for their annual get-together dinner. B. H. Gilpin, factory and service manager, was toastmaster. Donald L. Brown, newly elected president, was the speaker. Charles W. Deeds, vice-president, gave an account of the use of the Wasp and Hornet engines. A. V. D. Wilgood, chief engineer, also spoke.

BLACKHAWK ANNOUNCES 2 HYDRAULIC JACKS



Blackhawk hydraulic jacks

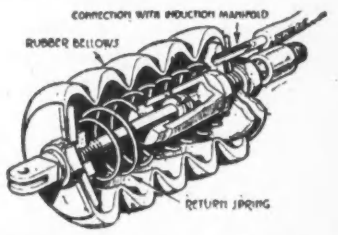
The Blackhawk Manufacturing Company, Milwaukee, Wis., announces the addition of two hydraulic jacks, each having a rated capacity of 2½ tons. One of the models has a low height of 8½ in., and is equipped with a single hydraulic lift having a range of 5½ in. A hand extension increases this height by three inches. The other model has a low height of 10 in., with a single lift of 7 in. The head of the latter is integral with the plunger.

Ignition Advanced by Engine Suction

With the exception of the centrifugal governor, which controls the ignition firing point in relation to engine speed, ignition control has remained in much the same position as that used on early cars. No provision is made for controlling the ignition point in accordance with load changes. With these comments the British publication, The Motor, continues:

"It has for a long time been known that a certain maximum ignition advance can, and should, be given to an engine, dependent upon the conditions of the load under which it is operating, and, if such provision can be made to accommodate these fluctuations, a higher maximum speed, improved acceleration and greater smoothness of running, combined with reduced petrol consumption, should be obtained.

"Delco-Remy and Hyatt, Ltd., the well-known electrical engineers of Grosvenor Road, London, S. W. 1., have produced such a control, cov-



SECTIONAL view of automatic suction operation ignition control. (Reproduced from "The Motor" British.)

ered by basic patents and patents pending, having the advantage that

(Continued on Page 12)

CUMULATIVE NEW PASSENGER CAR

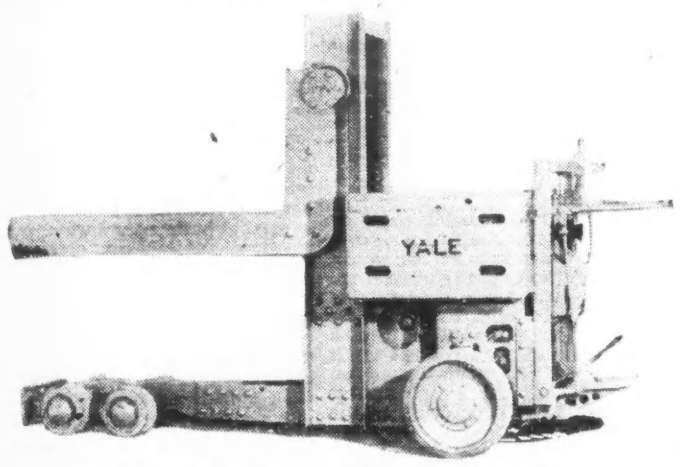
Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising desiring county, city or town lists, or lists of owners in any given Some of this data has been published previously, but it is

States	Auburn	Austin	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Arkansas			9	5	119	6		7	14	3	1	213			2	1	2			
Conn.	10	4	134	33	323	80	2	55	78	9	62	490	14	1	23	29	21		12	8
Delaware	1	1	24	8	60	15		3	2	2	3	114	1			1	2		4	1
Florida	6	21	78	10	217	34	1	8	20	5	18	622	6		28	16	4		4	1
Georgia	4	1	50	4	153	13		8	12		3	422	4		3	4	7		3	
Idaho			34	1	161	11		5	9	14	7	169	1		6	3				
Illinois	25	8	235	61	791	116	8	71	156	21	137	1445	41	1	63	50	38		38	22
Maryland	2	1	70	6	338	24		9	28	14	21	438	7		15	7	12		6	
Michigan	3	7	284	75	1194	59	4	33	87	14	145	1538			43	38	30		27	10
Minnesota	1	5	110	8	644	62		12	45	7	20	682		1	27	9	23		5	1
Missouri	5	9	151	18	855	50	1	23	82	12	44	1104	9	7	33	11	15		16	5
Montana			11		60	5		2	8	2	6	73			1	5			1	1
N. Hamp.	2		23	3	54	8		7	6	4	14	147	10		5	3	1		2	
Nor. Car.	3	9	66	7	339	31		8	35	1	25	723	3		13	13	2		3	2
N. Dakota		1	9		113	7		1	9	4	4	103			1	1	1			1
Ohio	37	11	243	47	1184	130	5	72	123	46	150	1771	32	1	77	56	41	2	20	9
Oregon	3	6	58	1	200	13		15	27	30	24	280	3		19	5	1		1	1
Rho. Isl.	2	5	33	6	76	34	1	18	16	7	13	201	7		3	6	8		4	4
S. Ca'lina		3	45		275	17		8	15		7	417			1	5	4		1	1
S. Dak.	1	1	25		187	14			21	9	7	204			2	5	12			
Utah	4		31	1	92	4		4	5	11	14	127	3		10	3				
Virginia	2	8	74	6	541	68		19	49	14	37	805	3		16	13	18		6	3
Wash.	2	6	53	7	148	14		4	13	8	24	289	1		6	3	3		2	
West Va.	6	3	27	3	262	20		11	35	3	24	362	2		14	7	1		3	
Wisconsin	2	5	92	10	362	33	1	12	46	7	26	469	2		16	10	6	1	10	
D. of Col.	10	4	54	7	124	15	1	11	36	8	9	358			15	2	18		5	4
Totals	131	119	2023	327	8872	883	24	426	980	255	845	13566	149	11	442	306	270	3	173	74
Ark., '29			42	5	585	27		28	67	14	28	1031			10	6	12		3	2
Conn., '29	21		143	50	403	65	3	108	225	24	165	595	21	5	57	41	70		54	14
Dela., '29	3		19	7	84	4			3	3	12	174	2		1	2	3		8	
Fla., '29	6		110	9	526	45	2	20	38	6	82	1033	10		39	31	36		12	4
Ga., 1929	2		102	5	488	21		22	50	2	30	985	11		19	28	29		15	3
Idaho, '29			49		367	17	1	34	44	36	34	530	1		25	11	12		1	
Ill., '29	26		484	97	1233	211	25	135	497	63	490	2529	43		103	238	156	5	126	24
Md., '29	3		112	9	530	54	2	45	92	20	113	787	8		33	34	37	3	22	4
Mich., '29	4		319	78	1271	57	3	64	206	51	393	2472	4	1	78	175	89	8	67	9
Minn., '29	6		98	9	867	81	4	36	67	82	105	1376	3	5	52	33	44		11	4
Mo., '29	14		216	25	1167	81	2	50	161	45	172	2108	19	4	61	50	65	2	31	9
Mont., '29	2		12	1	84	8		2	17	9	14	100	4		2	2	3		1	
N. H., '29	1		38	2	120	14		18	13	19	24	184	5		11	8	5	2	5	
N. C., '29			104	4	894	97		58	91	26	107	1761	4		17	45	12		9	2
N. D., '29	1		15	1	153	8		9	20	6	12	307			8	4	1		2	1
Ohio, '29	32		421	60	2004	203	12	172	334	112	651	3600	42	6	131	210	210	8	53	22
Ore., '29	4		90	4	418	41	1	41	75	76	57	803	6	4	34	26	29	1	3	5
R. I., '29	6		79	8	128	59	1	46	42	16	38	227	6		25	7	16		18	1
S. C., '29			47	1	661	26		15	27	4	30	997	1		3	14	15	1	6	
S. D., '29	1		38		326	20		4	45	13	28	421			13	10	24		1	
Utah, '29	4		22	4	171	10		12	14	24	24	319	3		9	15	10		2	1
Va., '29	3		116	4	1217	47	2	43	92	30	133	2078	8		24	30	55		10	4
Wash., '29	9		79	7	354	47	6	44	44	52	77	701	2		25	22	30		9	2
W. Va., '29	5		51	3	400	45		27	72	9	69	631	2	2	22	13	19		10	1
Wis., '29	4		145	10	669	52	1	48	192	33	175	1127	7		27	78	18	1	11	
D. of C.,'29	7		66	7	200	38	2	10	49	3	70	415	3		27	22	23	2	9	13
Totals,'29	164	*	3017	410	15320	1378	67	1091	2577	778	3133	27291	215	27	856	1155	1023	33	499	125

*Not in production at that time. Windsor is now included in the Miscellaneous Column.

Equipment - - - Development

Details of New Yale & Towne Industrial Truck



Yale & Towne 12,000-pound Industrial Truck

The Yale K33 industrial truck shown for the first time at the National Power Show by the Yale & Towne Manufacturing Company was announced in the December 5 edition of the Automotive Daily News. Details of this new unit are now available.

The platform capacity of the truck is 12,000 pounds. The effective length of the platform is 60 in.; platform width, 27 in.; platform height, low position 11 in., high po-

(Continued on Page 12)

FUHRMAN ANNOUNCES NEW TRAILER AND ALL-STEEL VAN BODY

Fuhrman Trailer Company, Canton, O., announces its new tandem axle trailer and a new all-steel van body. The company is also planning to introduce an all-aluminum body in the early spring.

A. O. SMITH DEVELOPS STEEL GRADE CROSSING

Milwaukee, Wis., Dec. 24. — Test installations of a steel railroad grade crossing designed by the A. O. Smith corporation are being made in Milwaukee. The steel plates with their raised openings to take care of ice are designed to eliminate bumps in crossing railroad tracks and to prevent skidding. Being of steel they are declared to be cheaper in operation than the present type of crossings.

Meet the Engineers

TO acquaint its readers with the important, but unsung, members of the automotive fraternity—the engineers who design and build the nation's cars—Automotive Daily News is publishing a series of brief biographies of the engineers of companies producing automobiles, automotive equipment, parts and accessories. These biographies will cover the training and experience of leading engineers and their outstanding contributions to the progress of our industry.

ROBERT B. SCHENCK, metallurgical engineer of the Buick Motor Company, began his engineering career as an assistant weighmaster with the United States Metals Refining Company in Chrome, N. J. Born in Beacon, N. Y., he attended the elementary and high schools in Nyack and later in Brooklyn, N. Y. He took his engineering degree at Lehigh University and upon graduation started his engineering career with the United States Metals Refining Company. Before entering the automobile industry, Mr. Schenck was for five years with the Carnegie Steel Company at its Homestead plant.

On March 1, 1915, he became chief metallurgist for the Weston-Mott Company of Flint, Mich. Two years later he joined the staff of the Buick Motor Company in the capacity of assistant metallurgical engineer, and a year afterward became head of the metallurgical department.

ROBERT B. SCHENCK

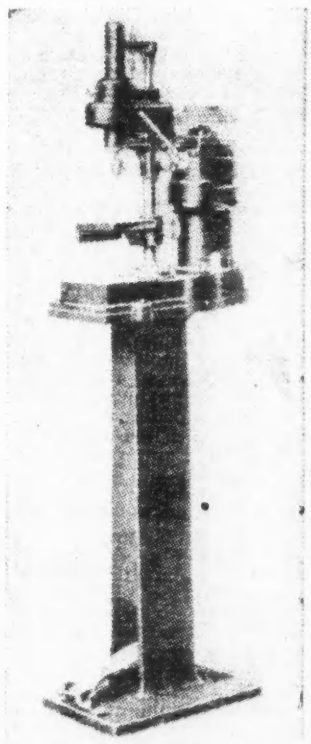
Mr. Schenck is a member of the S. A. E., A. S. S. T., A. I. M. M. E. and the Iron and Steel Institute of Great Britain. He has served on a number of committees of the S. A. E. and the A. S. S. T., and is well and favorably known throughout the automobile industry.

REGISTRATION STATISTICS, NOVEMBER, 1930

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies given here complete for the convenience of our subscribers

States	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Miscellaneous	Totals
Arkansas		3	3	2	1			15	7		5			2	1			421
Conn.	23	66	29	30	37		7	38	67	42	60		3	5	22	7		1,824
Delaware		2	4		9			7	6	2	6		1				1	280
Florida	8	26	7	11	12		3	35	30	12	18			5	11	1		1,278
Georgia	3	15	1	18	4			6	10	4	14		3	4	6	1		780
Idaho		16	3	4	1			21	14	5	10			4	4	1	1	505
Illinois	21	213	31	116	128	6	20	105	94	43	205	5	17	21	33	26	7	4,418
Maryland	3	40	13	9	23	16	3	39	34	12	41			9	11	9	3	1,263
Michigan	26	81	25	65	58	5	4	89	72	68	57		16	14	24	6		4,201
Minnesota	7	56	10	18	21	2	4	97	50	19	45		2	27	41	16		2,077
Missouri	23	91	41	50	29	1	16	104	76	27	55	4	3	16	55	23	2	3,066
Montana	3	3	1	3			1	6	3	1	2			9	2			209
N. Hamp.	4	27	3	9	7		2	17	10	10	3		1	2	5	1		390
Nor. Car.		12	1	6	11		1	28	23	3	9		1	7	6	1		1,392
N. Dakota		8	3	3	1			13	10		1		2	5	9			310
Ohio	20	184	32	80	102	65	25	178	138	60	126	3	13	37	109	34	1	5,264
Oregon	1	17	5	7	2			16	21	8	21			4	4	2		795
Rho. Isl.		27	2	10	13	1	9	10	19	27	20			2	9	6		599
S. Ca'lina	2	2	2	3	5			15	9	2	9			4	3			855
S. Dak.	2	8	2	18	2			24	10	4	12		2	11	9	1		593
Utah	1	18	3	3	1		2	6	9	3	4	2	1	3	3			371
Virginia	12	21	11	12	8	1	5	40	84	6	18		3	6	25	10		1,944
Wash.	6	11	6	6	10			21	21	8	29			3	32	11		747
West Va.	11	43	7	12	4		1	34	19	10	17		3	11	16	8		979
Wisconsin	6	106	23	22	12	1	4	49	62	12	66		4	4	50	2	4	1,537
D. of Col.	2	24	6	18	30	11	8	15	19	6	19			9	3	7	10	868
Totals	184	1120	274	535	531	109	115	1028	917	394	872	14	75	224	493	173	29	36,966
Ark., '29	2	34	5	6	5		2	51	35	4	8			37		10		2,059
Conn., '29	30	105	28	45	82	10	14	71	138	25	78	2	3	36		25	3	2,759
Dela., '29		16	6	5	7		1	7	12		6			9		2	9	405
Fla., '29	7	27	25	30	25	1	3	31	54	10	16	1	3	36		6		2,284
Ga., 1929	5	16	8	28	6		1	31	42	7	17		2	28		3	7	2,013
Idaho, '29	1	43	4	12	1			41	41	2	26		4	22		5		1,364
Ill., '29*	50	283	82	213	179	14	22	165	266	49	184	18	14	122		37	15	8,198
Md., '29	8	64	14	40	33	7	4	40	80	19	33	6	1	43		13		2,313
Mich., '29	59	96	43	99	83	8	5	95	126	35	52	1	9	58		12	1	6,131
Minn., '29	10	61	23	46	28	4	7	113	110	7	58	5	3	118		18	3	3,497
Mo., '29	20	101	37	84	46	4	15	85	146	15	91	6	4	166		35	20	5,157
Mont., '29	2	9	5	1		2		19	2	2	11			12		4		330
N. H., '29	5	34	5	14	10			16	24	10	8			16		9	1	621
N. C., '29	14	26	17	28	16			50	93		18		1	43				3,537
N. D., '29	2	9	6	10				28	20		1		1	30		5	1	661
Ohio, '29	72	228	75	236	137	64	23	178	397	43	176	17	15	255		87	14	10,300
Ore., '29	8	39	21	33	8		2	51	72	9	35		3	29		12	4	2,044
R. I., '29	9	39	11	24	19	9	14	33	39	20	28	2	1	27		9	3	1,010
S. C., '29	11	11	4	15	4			32	32	1	17		1	11				1,987
S. D., '29	1	21	6	37	3			48	27	3	18		3	42		5		1,158
Utah, '29	2	19	2	12	4			13	17		5	3		12		2		735
Va., '29	21	54	23	29	25	7	3	131	137	6	42		2	104		13	1	4,494
Wash., '29	5	26	14	40	15		1	53	37	5	41		1	22		22	1	1,793
W. Va., '29	17	40	10	29	9		1	30	39	4	18	6		34		5		1,623
Wis., '29	4	142	46	60	18	4	11	68	121	16	67	2	4	72		7	6	3,246
D. of C.,'29	5	24	12	32	22	31	10	28	41	10	28	2	1	15		5	20	1,252
Totals,'29	370	1567	532	1208	785	165	139	1508	2148	302	1082	71	76	1399		351	109	70,971

NEW HIGH SPEED DRILL



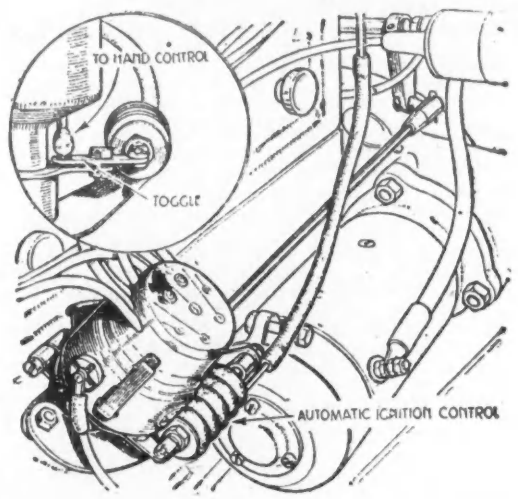
High-Speed precision drilling machine

The High-Speed Hammer Co., Rochester, N. Y., is now manufacturing a high-speed precision drilling machine, known as the model R-53, with a pedestal mounting. The three speed pulley combination affords spindle speeds of 1,500, 3,000 and 6,000 r. p. m. The control is by a foot pedal.

The machine will drill holes up to ¼ in. diam. The spindle travel can be set by means of the depth gauge provided. The working surface is 4 in.x6 in. and will take work up to 7½ in. high. The spindle is guided by a quill which is supported by annular ball bearings while two ball thrust bearings carry the top of the spindle at the feed arm.

Engine Suction Used to Advance Ignition

(Continued from Page 10)



INSTALLATION of control (inset), the toggle bar, by means of which hand and automatic controls are available. (Reproduced from "The Motor," British

will be applicable to practically any car of popular make.

The device is simple in construction, consisting of a rubber bellows barely larger than an ordinary matchbox, and having within it a coil spring which normally maintains the bellows in an extended position. Both ends of the bellows are sealed by caps, one being secured to a convenient fixed part of the engine and serving to carry a pipe connecting the interior of the bellows to the induction pipe; the other, which is free to move endwise within predetermined limits, connects to one end of a small compensating bar pivoted at its center on the distributor timing lever. The other end of the bar is linked up with the normal hand-operated ignition control, which is retained for use, if desired.

"As the carburetor throttle position is varied by the driver in accordance with the load about to be placed on the engine, there is a variation in induction manifold depression, and this is consequently communicated to the bellows, which are continually contracted and expanded in strict accordance with the load under which the engine is operating. The operation is simple, but to insure the maintenance throughout the entire engine speed range of the ideal firing point in relation to the load, great care must be exercised in arranging the linkage and in the location of the bellows connecting pipe where it enters the carburetor.

"The degree of vacuum existing in the induction system when the engine is running against more or less closed throttle conditions is high, but it becomes low when the throttle is opened, particularly when the engine is pulling hard up an incline and when the car is accelerating rapidly. The effects of these variations in manifold depression are well known to drivers of cars fitted with suction-operated windshield wipers.

"With these points in mind it is easy to imagine how this variation can be applied to the control of the ignition, which, to provide sweet running and gest performance, must be advanced and retarded with variations of engine load in addition to being timed in accordance with engine speed. This dual effect is obtained by using the device just described in conjunction with the usual automatic governor control."

In a test run in a car thus equipped, the author was impressed with the "sweetness of running and the extraordinary way in which the engine would throttle down to an idling speed, yet propel the car without the slightest sign of jerking. The speed was less than 3 m. p. h.; the passenger stepped out of the car and was able easily to walk faster than the speed at which the car was traveling. Yet, in response to the depression of the accelerator pedal, the car pulled away sweetly and rapidly with no roughness at all, purely owing to the fact that the ignition advance was controlled entirely in proportion to the engine load. To obtain a comparison, the automatic control was cut out and the hand system used. In this circumstance it was not possible to reproduce the same smooth running.

There is no reduction in the maximum speed which can be obtained after fitting the automatic control. It should be mentioned that the particular car tested had already covered over 12,000 miles without decarbonizing, and the running was such that one would not have imagined any heavy carbon deposit existed.

Y. & T. 12,000 Lb. Industrial Truck Details

(Continued from Page 10)

sition 57 in. The ground clearance is 3½ in. The overall length and height are 127 in. and 83 in., respectively, and the overall width is 45 in. The turning radius, outside edge of truck, is 120 in.; inside edge of truck, 64 in. It is a six-wheel steer unit.

Separate drive and hoist, series wound, fully inclosed motors are used.

The frame is of structural steel bar construction. The drive is through double-reduction spur gears mounted on tapered roller bearings. The drive is conveyed to the wheels through a full floating axle and inclosed universal joints. The hoist unit is a triple reduction spur-gear design which runs in oil. The reduction is 210 to 1. The elevating platform is raised by two independent roller chains with an automatic spring take-up for adjustment. If the descent of the platform is interrupted, provision is made to release the ratchet on the hoist gearing and prevent breakage.

The truck brake is of the external contracting, double-shoe type which is automatically applied when the operator releases pressure on the foot pedal. The brake, when applied, operates the cutout switch to break the electrical circuit. The hoist brake is of the same type installed on the motor shaft and is directly connected to the hoist controller.

Running speeds are—empty, 5½ m. p. h., with 12,000 load on level concrete 4 m. p. h., with 12,000 load, up 10 per cent. grade 2 m. p. h. The hoisting speed empty is 11 feet per minute and with a 12,000 load 5½ feet per minute. The lowering speed is 11 feet per minute for all loads and is controlled by a centrifugal brake.

Weights — Truck, less battery, 5,000 pounds, with 15MVA25 Exide battery, 6,430, with 24A10 Edison battery, 5,870 pounds.

BUDD MFG. CO. AIDS IN DEVELOPING AUTOGIRO FOR COMERCIAL USE

Philadelphia, Dec. 24.—According to plans recently announced, the Kellett Aircraft Corporation, a Delaware concern with offices in the Atlantic Building, this city, expects to be in production on its first comercial autogiro models some time in the early spring. For the last year and a half the corporation's engineers have been studying existing autogiros and the autogiro theory, under the license agreement held by them for use of Pitcairn-Cierva autogiro patents. The concern was organized in July, 1929, with authorized capital of 130,000 shares of no par value common stock. The officers of the company, who also are directors, are: W. Wallace Kellett, president; C. Townsend Ludington, vice-president, and R. G. Kellett, secretary-treasurer.

Already a small experimental autogiro has been built and tested by the company. Known as the K-1-X, this ship was built as a flying laboratory. Interesting new features will be incorporated in the future models. The construction differs from standard aircraft practice, inasmuch as built-up members of stainless steel are employed in place of the more usual torch-welded steel tuning. The type of construction was developed in collaboration with the Budd Manufacturing Company.

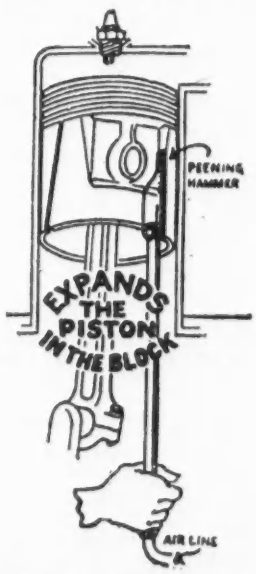
F. B. COYLE WILL TALK AT WESTERN NATIONAL METAL CONGRESS IN FEB.

San Francisco, Dec. 24.—F. B. Coyle of the International Nickel Company, New York city, will speak on high test cast iron at the Western National Metal Congress, to be given in the Civic Auditorium, San Francisco, February 16 to 20.

The delegates from here will join with 5,000 representatives of the metal industry and users of industrial machinery, in a concerted move in the interest of better metal products.

Each year the congress of metallurgical and mechanical experts is given under auspices of the American Society for Steel Treating, as a non-profit-making, educational affair in one or more key cities of this country. Thousands of dollars worth of metals, testing apparatus and industrial machinery will be used in demonstrations, and will make up a great display of mechanical progress in a hall near the convention rooms.

WATERVLIET PNEUMATIC PISTON EXPANDER



Watervliet Pneumatic Piston Expander

Watervliet Tool Company, Albany, N. Y., has introduced a new pneumatic piston expander, which is designed to eliminate piston slap without removing the pistons from the cylinder block. The tool is essentially a specially designed peening hammer operated by air to expand the piston while in the cylinder. This operation is performed from beneath the engine.

LINK BELT 1930 NET EXPECTED TO EXCEED $2.60 PER SHARE

(Continued from Page 1)

in general business and will report a net profit for 1930 considerably less than the record net of $3,484,686 in 1929.

For the nine months ended September 30, 1930, the Link-Belt Company reported a net profit of $1,802,111, after charges and taxes, equal after preferred dividends, to $2.26 a share on the 709,177 shares of common stock outstanding. That compared with $2,431,323, or $3.15 a share, in the first nine months of 1929.

Annual dividend requirements on common stock at the rate of $2.60 a share amounted to $1,843,860, which, added to $260,000 preferred dividend requirements, made a total of $2,103,860. To earn that sum the company for the last three months of the year must report net profit of $301,749, or 33 cents a share on the common stock, as against $1,053,363, or $1.39 a share, in the like 1929 period.

As October net profit after charges and taxes was approximately $145,000, and certain substantial year-end credit adjustments are in prospect, it appears more than likely that Link-Belt's per share earnings this year will exceed $2.60 and approach $3.

On September 30 last the company had $3,783,029 in cash, compared with $2,363,176 on September 30, 1929. The current ratio was better than eleven to one as compared with better than seven to one on September 30 last year. Corporate surplus of $7,006,536 compared with $6,259,282 on the corresponding 1929 date.

NASH MAKES GOOD SHOWING FOR YEAR

(Continued from Page 1)

share on the 2,730,000 shares of stock. Such earnings would compare with net of $18,013,781, or $6.60 a share, for the fiscal year ended November 30, 1929.

The decline in profits, as compared with a year ago, is not surprising in view of the severe retrenchment which has taken place in the motor industry this year and the abnormal conditions under which Nash has been compelled to operate. The company was out of production during the greater part of the summer months in preparation for new models, and this condition followed opeation on an unusually low level during the first six months of the year.

For the first nine months of the fiscal year, Nash's volume of business was down 55 per cent. and earnings declined 60 per cent., compared with the corresponding period of 1929. The full year probably will show sales of around 56,000 units, against 117,000 in 1929.

Business during the final quarter of the year continued to reflect depressed conditions in the industry. Sales were stimulated by the introduction of new models at lower prices in October, but were considerably under the showing a year ago.

Total sales during the three months ended November 30 probably amounted to slightly in excess of 16,000 units. This would compare with shipments of 27,550 in the final quarter of the preceding fiscal year. In other words, whereas the first nine months' shipments of 40,000 units compared with 90,550 in the first nine months of 1929, a decline of 55 per cent., the shipments in the final quarter show a decline of only 41 per cent., compared with the corresponding period a year ago.

Net profits for the final quarter of the year are placed at slightly in excess of $2,000,000, or close to 75 cents a share on the stock. This would compare with net profit of $4,202,924, or $1.53 a share, in the final quarter of 1929.

Both with respect to shipments and earnings, the final quarter of Nash is likely to average better than the preceding three quarters. Shipments of 16,000 units would compare with 17,500 in the second quarter, which was the most active period, reflecting the seasonal spring upturn in business. They also would compare with shipments of around 11,000 units in the quarter ended August 31, 1930, the preceding quarter, and with shipments of 10,500 in the first quarter, the three months ended February 28.

OTHER FINANCIAL NEWS

LINK BELT

Action of the Link-Belt Company directors in restoring the common stock to a $2.40 annual basis from the $2.60 rate which had prevailed since June, 1929 was due entirely to lower current operations.

The company, with customers including all industries where large quantities of materials are handled and where mechanical handling can be substituted for manual handling, naturally has felt the slowing down in general business and will report a net profit for 1930 considerably less than the record net of $3,484,686 in 1929.

For the nine months ended September 30, 1930, the Link-Belt Company reported a net profit of $1,802,111, after charges and taxes, equal after preferred dividends, to $2.26 a share on the 709,177 shares of common stock outstanding. That compared with $2.431,323 or $3.15 a share in the first nine months of 1929.

NATIONAL STEEL

Holders of more than 85 per cent. of all the outstanding shares of the Michigan Steel Corporation at a special meeting voted to accept the offer of National Steel Corporation for purchase of the property and business of Michigan Steel Corporation.

Payment to Michigan Steel stockholders is to be made on the basis of 50 per cent. in 5 per cent. ten-year debentures of National Steel, 25 per cent. in cash and the remaining 25 per cent. either in cash or National Steel common shares at the option of Michigan Steel stockholders.

MASSEY-HARRIS EXPECTS INCREASING PRODUCTION

Batavia, N. Y., Dec. 24.—The local plant of the Massey-Harris Company, manufacturer of farm implements, tractors and equipment, has between 350 and 400 men on its pay roll as the year draws to a close. This compares with a low of 150 workers early in the fall and a normal force of 1,000 employees. William S. Milne, general superintendent, says there are no plans for further curtailment of operations or employment and he expects the 1931 production program to result in steady additions to the pay roll from week to week throughout the first half of the year.

TEEFY-SELTZ PLANS NEW WAREHOUSING DEPARTMENT

Philadelphia, Dec. 24.—The Teefy-Seltz Company, Inc., distributor of Auburn and Cord cars, early in the forthcoming year will establish its service and warehousing departments at 20th and Hamilton Streets, where it will have 35,000 square feet of floor space and a siding on the Reading Railway where shipments of cars will be received from the Auburn factory.

S. & G. MOTORS TO SELL HUDSON-ESSEX LINES

Herkimer, N. Y., Dec. 24.—H. L. Johnson Motor Sales, Inc., of Utica has appointed the S. & G. Motors, Inc., of this village as Hudson-Essex dealer in Herkimer county, effective January 1, 1931, for the following territory: Mohawk, Frankfort, Ilion, Herkimer, Little Falls and Dolgeville.

PIERCE-ARROW DEALER NAMED AT DAYTON

Dayton, O., Dec. 24 (UTPS).—The Stone Motor Car Company has been appointed Pierce-Arrow dealer in this city by Price Kenney, representative of the Pierce-Arrow Company. The Stone company has a showroom at 360 South Main St. and a large sales organization is rapidly being created.

TO SPECIALIZE IN PARTS

Buffalo, N. Y., Dec. 24.—The Harlem Auto Wrecking Company has been established at 1265 Walden Ave., as a partnership, by John C., Arthur H. and Melvin D. Raab. The new concern will specialize in used parts for automobiles and trucks.